

aa 3302

<210>	3018	
<211>	1053	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 3018

aaggegeaat aegeteaate eeateeggee gagtttggte ggtgeattgg agtteeagte tgttttgtcc tccttaaaac ggtcgaggag ccacaataga agccactcaa tcggtcttga gaggtactca gacaattcgg aaagcgtaca gggcgatcgt tcacagttcg acaatatatc 180 catagcatet catececaaa geageegeae eeagggeaae agttttetgt etetegatea aggaactaat cgaactcgag cggtctcggc aaacgacgct atgggtttga aattagacac 300 caatttette accagtgaca atgeacegea accaaaattg actgtgagea gacetteaat 360 cgaggatgga tctaacacgg agatctcgca tattctcgag tcccagaatg gcacagagtt 420 taccaggica cccacgicta gigcattitic alegegeagt ccaagecigg geccaagace 480 agggtccage gtecataate etactetaet egeaceacet gatgtettee agteceteaa 540 ctactccgaa gcggcatcgg attcccgctc cacgcctcaa gtatccccaa agggtactag 600 atatgttacg gatgggcagg acaacaactc atcaggcgca cccagtccct tcccccatt tcaagatgtg cctgggtcac cattatccac ggcgccaagc attcgtctgc ccgcctcatt 720 cagtccagca gagccgttac agtaccagga agatacgttt gacagtggca gtcgacttac 780 atctccggtt aattggtggc ctcgatcgcg ctctttactg cggctggttg tgtctacact cttcccaacc ctggatgggt ggaaagccaa gacaatttgg gagaaaattc taggcattgt 900 cgccgctcct agcgtgttcc ttttgacaat caccctcccc gtggtcgacc cagtatctcc cgaagttacg tetgetactg tgcetgteat tgtgaettet geagaagatg ateegagege 1020 agcaacgcct attgtgcgcc taccagagga tag 1053

<210>	3019	
<211>	1677	
<212>	DNA	
<213>	Aspergillus	nidulans
<400>	3019	

gctagacagg caacggttgg cgctggtccg attgagctcc gagcttacta caagccattc 60 gtatataaag ccctttatga cggccgaaag atggatatgc tactatacag attcagcctt 120 cttgcctttg ggagagcgtt tgatactata cgcaaatcat gggtctccgt gtcaaagccc 180 ttgcagtggc agetetgget acceteagee aggeetegee ggteetatae actegegagg 240 acactacete caacacaace tacgeettta ecaacageaa egggetgaae tteacecaga 300 tgaacaccac acttectaat gtaaccatet tegeaacagg tatgacegte cetteaettt 360 cccatctctt tccaaccccc ttcagcaaac agcaaactaa acaatagcaa caacaggcgg 420 cacaategee ggeteggeeg cetetaacae tgeaacaaca ggetaecagg egggegeeet 480 eggaatecag acceteateg aegeegteee egaaatgete teegtegeea acategeegg 540 cgtgcagatc tccaacgtcg gtagcccaga cgtcacctcc accatcctgc tagagatggc 600 gcaccgtctc aacaaagttg tctgcgagga cccatccatg gctggcgcag tcgtcaccca 660 cggcactgac accettgagg aaacggcett etteetegae geaacagtea actgegggaa 720 gcctattgtc atcgtgggcg ccatgcggcc cgcaacattc atctctgccg atgggcccta taatctcctg caggccgtta ctgtggcgag cacgaaagag gcaaggaaca ggggcgcgat 840 ggtcgtcatg aacgaccgca tcgcctccgc ttactacgtg tccaagacaa acgccaatac 900 gatggataca ttcaaggctg tggaaatggg gtacctgggt gccattatct cgaacactcc gttcttctat tacccggccg tgcagccaag tgggaagacg actgtcgatg tgtccaacgt 1020 cacctccatc ccgcgcgtcg acatcctcta ctccttccag gacatgacaa acgacacgct 1080 ctactcaagc attgagaacg gcgcgaaggg cgttgttatc gcaggatctg gtgctgggag 1140 tgtcgatacc gccttctcga cggctattga tgatattatc agcaaccagg gagttccgat 1200 cgtgcagagt actaggacag gaaacggaga ggtgccgtat tcggctgagg ggggtatttc 1260 gagegggtte etgaacecag etaagtegag gattttgttg ggattgetgt tggeecaggg 1320 agggaagggc actgaagaaa ttagggcggt gtttgggaag gttgctgttt gattcccgac 1380

tgcccagggc ttatgatgtg atttgatgag atatggtata ataatccgta tatatccagt 1440 agatatcatg gaagatgatg aatagctgcc gatatgtttg tgtatctact cagtatagtc 1500 tctggcacta cggtgtatat gagacgacat cgcagacacc gcatatgcca gagatcgaat 1560 attctatagc gagtatactg tggtatgcga gtcaccttga ttgacaccag cgacctggct 1620 aacgacaccg ctgcataaat gaggtgacgc cgtagtacga catggccgac ctcatat 1677

<210> 3020 <211> 1349

<212> DNA

<213> Aspergillus nidulans

<400> 3020

ggtcttcatc atccgaacat tgtccagtat ctgggaacta ccgccgatga tcaatatttg 60 aacattttct tggagtacgt tcctgggggc tctattgcta caatgctcaa gcaatacaac 120 accttccagg agccattgat aaagaatttc gtacggcaaa tccttgcggg tctgtcctac 180 ctccacagca aggatattat acaccgtgat attaaggggg cgaatgttct cgttgacaac 240 300 aaaggtggca taaaaatctc ggattttggt atctccaaac gagttgaagc atctactgtt cttggatccc gagcaagcaa tggtgggggc catattcacc ggccttcgct gcagggtagc 360 gtttactgga tggcgcccga agtcgttcgt cagacggcgc atacaaagaa ggctgacatt 420 tggagtctgg gatgtctcgt cattgagatg ttcatcgggt ctcacccttt cccagactgt 480 agccagcttc aagccatatt tgcgattggt agcaacaagg ctcggcctcc agccccagaa 540 catgctagta agcatgccgt tgctttcttg gatatgacat tccagctcga ccatgagaag 600 cgacctgacg cagacgagtt gctcaagtcg cccttccttg ctacaacact gtacctgaaa 660 tcctttacga tgtcggatag acaatgggcg ttttttagca ttgagcttgg agatttggag 720 ttcgaattat gtatcagggc aataatactt ttggtctttt gcgtattctt tccccttcga 780 tatgataccg tccctcttga ttttaatgct ggcgttgatt aaggtagatt tgggaaatat 840 atatatecee caagatattg egggteatea aaaceeaate gaaaggtteg tggegteage aggggctggt tgcggtttta tgaccttttt cacccgggtc cactgatttt catttataaa aatatagegt ttacetttta eetgttgtaa tetgaagett etegttgtag gteteattga 1020 cettatttga tteettgete gaagttaage atttetggtt tataacteae teaegegaea 1080

- <210> 3021 <211> 1279 <212> DNA
- <213> Aspergillus nidulans
- <400> 3021

ttcttgcatt cacttatagg ctccgaacga gactcttctg cggaccatca ctgaacggtg 60 cgacggagta ttcgttacgc ttgagcaggc agtagaggaa acagaaatcc cccgcgtcaa 120 gcctgtccgg ccagttgcat cattcaaagg tttcttacaa ttaggtaacc ctgaagaata cgacactgcg gtccgcattc ctgttgagcg gtacccacga acaatggtag ctaaaccccc aacggccagc cagttcgtcc tgcgatcaga tttagccgct ggacaagaag gcccagtgtc 300 atctactgcc gttcctgaaa cccagcctga agatggtagt aatctcacca atgtgaggaa 360 cttgagaact taccaggtca gcgacgagag tgcccctggt ggtaagatcg atgttgaacg 420 ggacgacttg gccaagggat atgagtatgg acgtactgct gttcatatca gcgagaccga 480 tgagaacatc acaaggctgg aaaccactgc ggctatggag ctagtcggtt ttattcagag 540 cgaacgggta cgtactgctc gaacctacga ctcgccttcc gcgactgaca ttcccagtat 600 gaccgataca tgcatttgtc caatagtcac atcatcatcg ccaaccgtgc taatgacaaa 660 geeteacttg cactateete etteateeat geeetgtttg aacttgagag ttatgeegtt 720 gctcgtctgg tcaccaaaga gaacaaacct cctaccctag ttctgctcgc accttccatc 780 840 gaaccagact acgagtgcct cctcgaagtg caactaccat tcgccgagga cgtccgaaca 900 taccgcttcc cacctcttga ccatgtagtt accgtgtctg ggaaggtggt aacgcagcat cgaaaccttc caaatgacga ccttcttgat gccatggaca aatacgtaga tagcatggag 960 ctgaagggca cagacgagga tgggtaaact acccaacatg cctcgatatg tacacatcgc 1020 taacgaatac agagacctgg tcaatacgcc cttcccaatt gatgactcct tctcgccagt 1080

tetacacege gtgaacgege tgattegete tegagetata cacceaaacg accecatece 1140 gecaceagea aggateetea etcaattete geaaceacea gageacetee teaaaaacge 1200 agaggeeate teaagagget tattgaggta getgacgtea agaagggtae taageaattt 1260 teeceattee acaaagagt 1279

- <210> 3022 <211> 1961 · <212> DNA
- <213> Aspergillus nidulans
- <400> 3022

ttatgatcgg agagattgat acgctagctg atcgagtggg agggaagtta cagaatggaa ttgtcgaggt tgaagcatat aatcaggaag aatgaaggtg ggtattatca ttgcattatc cagtctgctt tgagggtttc atgatcttcc agtctgctaa ctagggatta gatacgatgt 180 egtegttetg categetgte etcatttteg teetegttet gttattaata etagteateg 240 ccctatagtt tgggggctgt gaattgctcg aaattctctt ttggacgttt agaccttggc 300 cttcttgcgt gggcgggagt cttcctcttc ttcgtcctcg tcatcttcat cctcatcctc gtcgtcgtcc atatcgaaat cgtcgggatg ctcttcaaag gattgggctt aaaaacaaat tagctgggat cgtctcgggg agaagagaaa gttataccat agtacttcag cgcattgggc cagaggtett cagcaagggc aacggccaat tegetteegg cagggaagge ttegatetet tegaagtegt egteaaegte etegtetteg teggeetegt eateetegae aettteteet 600 ttgagaaget teteaaattt eteetgttee teettggteg eegeegeaga ttgtteggea 660 gtcacgtcac ttccgcgata accgaagaag ttgaagaagc tttcgccgga aggatgtcct 720 agagggteet categtegtt eteateatee teatecetet caagggeete caceteagea agettetett ggagettett gaactetgge aacteectae gagaaceaee ettettetee 840 gcctcaaaca gatcgcaggt ggcatctagc agacccttgg tgacatccat atccttcttc 900 cagttgatgc ggacaggctc ggaaacaagt ccatcccagg tcctcttctt accactggca 960 gtggtgaaaa cctgctttcg ccagtatagc tccttgacca gcttctcatt ctcaaagacg 1020 gggttcgcat ccccggtgtg cgactataga gtagcacgca tgttgccggt ctagcccaga 1080 tetttegegt gaetagtagt egetetaegg teaagttate tagggeatag teaaggateg 1140

<210> 3023 <211> 3292 <212> DNA

<213> Aspergillus nidulans

<400> 3023

60 gaagccttca taagcgtcac agcaagcctc cagacatcga gataaggctg acgtctccat caggegetae gtaacetaaa ecatageeta tttetgatge teaacaaget cagggageea 120 accgtaagcc tctggtgtcg gtggagtgct ggacgaggaa ggtttttgat aagcctgctc 180 tggggtcgtt agtggtgggc ctttggtagt cttagtttcc ttattttgaa tataaagctt 240 300 tettgtetae taagettett ggagggegtt aegtataegt aaageetege eacegttgga aaggtcaaga cgttcccatc aatactccac ccgcgctagg agaagaaagg ggtttacgcc 360 420 tttggcaggc cgccggtcat ataaaaaccc catggagtaa agatcatgat gctttggcgc ggtcggagct tctctgcttg gattacattt atagcgttag ttggcatata ttactggcct 480 caacatttta ggtatttctg agttcttgtg cccgttccac agcctttcag gtaatagaac 540

caaagctgcc tgctattatg aagacagaac agtacgatca aggaaaggtt cagagatggc aaagagcaat gctgttgtct ggcctacgtg cattccagtt tccgttaact ccgccgtaag tccatccgcc cctcgtgacg aaaaccctaa gtccattagc tccagcgaat ataactgcaa ctcctcgtca tacaatttcc gatatactta gcaagcaaat tataaggggt atctttgaat 780 taatttacga aattcattat gaagattatc cttacaggca cgaccggctt cgtcggaacc 840 gaagtcctcc accaagctct ccagcatccc tccatcacat cgatcgtcgt tctatcccgc 900 aaacaactte etgaeteegt taetaeggae eegaaaatea etgteaagat tategatgae 960 tttctttcat atccagactc gcttctccat gacctcatag gtgccgaagc ctgtatctgg 1020 taggeeteea eegtttaeee tetetgeate teaetggata eetatetaae gtatgtatge 1080 aatataggac cettggactt ceetaceact eegatatage ettttatege agagttaatg 1140 tagaatatac gctcgctgcc gtaagagcgt tcactgagtc tctcacgccg agcttagaga 1200 aaccactgag gttcatctac tgcagcggtg cagcggccgt tcgagaccaa gaaaagccct 1260 tgtggctgat gccacagaca cgcaagatca gggtgggtct ctgctctact tcatcctttg 1320 cagtgttgtt ctacttttcc ttttctcacc tggatagctt gcttgatgaa caatctgacg 1380 tggtgatagg gccaagttga gaatgagctc sttgaacacg ccgaaaagaa tgctggcaag 1440 gttgaggttt atgttctccg tccggcgatg attttctcaa cgggctggtc gttgggctgg 1500 cttctctctg gtatgacgcc gtcgattgcg gtggatactc tgagtagggt catgttggac 1560 cttgccgtta acgggggaag ggtggggagg gtagtggaaa acaaggaaat gaatgcatgg 1620 gacaagacgt agaagtatga ttgatgtctg ggatggtctc attctcgttt cgagatcgag 1680 ttccgtacta ttcggcattt ctctggcagt ttacccagtc tgatttcgct gagggagcta 1740 gcaccctcac atgtcattag agcctggcag cggttttctg gcatcaggac gaataaacag 1800 aggccctgcc tgtggcccaa cgccccttca ccaccatgga taatggaggc tcagttcgag 1860 cgagtctgta tgtgaggtgt ggatgccagt attggcgcag aactacttta ctaggtctgt 1920 gccgtttcat gagggccgac gctgcaatga gcaaggtttg agttgtatga ggtatggttg 1980 attgttgtta tctgaagtgt taacctgaaa atatgactgt ctaagactaa tctgatagtc 2040 atgacgcctt tttagcttag tgatatattt tccccttcct tccccagtag taggaaaggg 2100 tcacaaccca gtccctaata cctgaagccc ttaattettg tccaatccgt atgctgttag 2160

gaatttaatg aaatacttat agtgctggct tacgtgactc tgcccactta actcaagatc 2220 caccgtgcgt tgaatgaaaa gcagtcagtc agccatcatc caccacaaag tactacctca 2280 attecteaca ttggageget aggtetetea tecagecagg taataceege eecagetgee 2340 gctcgagtat ttcctccttc agtttttagc cagaaaataa gagccagcca cgccgtattg 2400 acggggcagt ctcgggttat aaggggaaaa gagaatagtc atacattcaa aggggccagt 2460 ctaccgagct ggtggtcggg cagtaagaaa acaaacatga ataaataagt aaaatatata 2520 aataagaagt tactgtatac tggctgagac ttctcaaatg tggatagaac aatcttagaa 2580 caaaagagga agcgcttagg atgattgaac tactgatgtc ctcaggctgc tgtgacagta 2640 acgatacctc atatattacc agttactgct gggcgagtgt tggcttacat atgagttgga 2700 ageggggetg ttetgtateg taaaceagtg aettteaetg gatgetgget etagetettt 2760 ctgttaatca cccactcacc agatatacaa aaatgagcgt ttgtatctgc cttgaatagc 2820 catcacgata aatatgaagc agcgttctaa acatatccca tcaactggct aactcccctc 2880 tegecaacte agageagetg tetgetgetg categgeage teatatteta ggeetetgat 2940 ctcagctgcg caaaatcgct tcgaagagag cttcaacgcc ctgttgaggc gacaccttgg 3000 actttgcacc tctcgctgat tgtggtttat taccctatta acgaggttcg accgtcgagc 3060 caccgtcgtg ccaccatcgg gccacccggt ggaatgggaa caggaaccac agcacccagc 3120 tggacggaat cttcgcgcca ccaggccata gaggatacag gagcgcgata tatagggaat 3180 atacgcatat atgcgtgtgt gtgattgggc taaatgaaga gagaaatggc cctcgaaagc 3240 catactatct acctacactg ccagcataga tggacaacct gaagagggca tc 3292

<210> 3024

<211> 600

<212> DNA

<213> Aspergillus nidulans

<400> 3024

tgctgcgatc tgcaagaaga ccttgaattg cagtgtcaac cccctgtaga tcttagattt 60 gggggagagc cactctgaga aaccctccag tgggcggtag aacagcctcg accgaatgta 120 atccttggaa aagggtgatg ggcctggcgg cgctggccgt gttcctgcat atgctgcgga 180 gggcctgatg tgttgggcga gaatttgaaa ggatgaggga gaatcatgat catatgtgcg 240

agaatagaaa	ccgaaccgaa	ctagacttgg	ccgtcagtac	gactcgtccc	tcgaacatct	300
agataaaagc	aaagggcaag	gctgcgtgag	gttatcgaaa	aaaattccct	ggaggcatac	360
ccgaaaagca	cccgctaaga	acccacgaac	ggcctcagac	gtgatctctt	ctggcggctc	420
aacatccgct	ctttgcgagg	aagggggagg	cattgtgata	gcctaagatc	acgaagtccc	480
aagctatcat	tcttttccct	aaagattgcg	gcgtatgaat	tggacgccgc	tccaaatccc	540
gagcaatcgc	gatgacgcag	ccgggatcaa	cattgctcca	aattccggta	ataccaatac	600
<210> <211> <212> <213>	3025 102 DNA Aspergillus	s nidulans				
<400>	3025					
ccgccatcgg	agaaaaccat	agcagtcaac	tacccgccct	tgacgcatct	agagaccatt	60
cctttagtgt	attccttaaa	agacaagctt	gacatggaat	ca		102
<210> <211> <212> <213> <400>	3026 1550 DNA Aspergillus	s nidulans		·		
gcgctgactg	tgggtattgt	gccctggact	cttttgccaa	tgacgaagac	aaatgatgcg	60
ctgcatgaga	gggcaaagaa	ggtctttgtc	gtcacggaaa	agacggccga	tgaagtgaag	120
, gagttgttgg	ccaaatggaa	ggtgcttaat	gcaatccgcg	ggttgttacc	gctggttggc	180
gggttggttg	ggtttttggc	tttttgaatg	atgcatcagt	atagtaatga	atgcaatgtt	240
gtgcagtggg	ttagagtggg	agggtataac	gcgatcatta	tgaatattaa	acgtaagtat	300
gtacatatat	ggtattattc	acctcaatgg	acctccagcc	gaccttttgt	tactcgatac	360
cctggcgtac	acgatagcca	tcagcctaga	cctcgaactt	ctcgcgccag	catccctctg	420
agatcttccg	cgtctcttat	tgcagctccg	ccggtggcgg	ccttgaggcc	ggcagttctt	480
gcatcggcgc	ctgcatggaa	tgcttgttcc	cattcgcgta	cacatccgcg	acccgcttat	540
cctgctgcgt	cggcgcaaac	gcctccatcg	agttcggcat	ctcgcccggg	gctacagcac	600
cggaagaacc	agaccgctgc	gatcgcaccg	agaaccagtg	gtatgccgac	gcctaacccg	660

acteegagae egacacegag gttgetgtet gagetgttgt egetgeeget geegeeegtt 720 ggtgttgtgg tcggtgttga ggtcgtcgta actgtacttg tagtcgtcac tgaggtcgaa 780 gtcgatgagc tactcgtgct ctctggcgag agactgctga ctacaaactc gacggccgga 840 atogagaatg totgggttga gttattgcag toacatooto ogtacgoggt gcagcagaac 900 gteteggtge egeaggetgt gaegegttte eggaatetga aaccatecae ategeeeegg 960 ttaagtggga ttcacttgag atgagcagtt gagcgtaggc aagacatact ccggacgttt 1020 egeactgtgt egegeatgte tegacgtete egttaattea gteetgtatg etgeatgtgt 1080 tttgccataa tgtcattccg tcgtcgtcaa gccgcccgca gaggccgttc gttgcgcagt 1140 actetecete geogeageat tgegetgggt tgeegeeeta agageaagta atgegegtta 1200 catcctcgtt gccgtcgcgg tcgtagcact tggctaccat tttggcgccg atcgggcgag 1260 gtcggcgggt aatgggacgg tgtactgtgc tagagctata gctagggctg gtgctgatgc 1320 tgccagatct tctcccggga tgaatgcgag gatggaaaaa gtgtggatcg cgagacgctg 1380 tggtccacgg gcgattgcct caagaacgaa attaagaatc caaagaagag ccgatccgag 1440 gcgaaaggga ggctgagcgt gggatcgcta gacgaagacc taaggccaaa agatgccagg 1500 aaattgaagt tttggcaaga tgcggtaagg aaccaaagcc ctggtaatcg 1550

<210> 3027 <211> 2834 <212> DNA

<213> Aspergillus nidulans

<400> 3027

tettgcatet cacacetgtg tegtetecat trettettea treettgttt gaettreett 60

tgatattgcc atattettac aaccacetca egegagtate teattreett eegatteget 120

ttaagecaat cagteacece tettgeeege teaagegaac aaacggacea teetegeteg 180

accagetega tatecaacet gaataacgga tggegggttt gatgggeget gattgaegag 240

egagecette tgeeetgete eeegtageaa traacatatg geeagacaaa ggeeeaacat 300

teaeegeeag gaeeetettg aggaeteteg egeaetgeee tegtetgetg gtgeeteege 360

tactgeegee aggtacatae eagateettt eteatteta eeeegegttg geeteette 420

ttegaegeae tgtgtteegt teatteeett eeeeateeeg gtateeeage tteggtatee 480

cgccgacgga gtttcggcaa acaagtattg aagaccggct cctttggacc tctggagcac ggagetettg gagettaeat gteeteatga agategeeat caattgttte taacateate 600 atcaccccgc gatcacactt ttttccctgt cctctctgaa cccttcgtct agtatcgtgc 660 ttcgtgagtg accagtttct catgtcctcc agaatcactc gctcggccgc gagacaagct 720 geagattete eccegeeege eggtteeggt ecctetteta cateeeege egetggtteg 780 gccccatctc gaaagcgaaa ggctcccgca cgccgcggtc agtcaccgga ctcctcggag cggccaaata gtcatcaatc tccccatcga aagaccaagc gacaacggcg tgcaccttcg 900 ccacgagcgg caaacgcctc tgctgcagct tctcgtcgtg gtacccgaaa ccgcccaact atgtcacacc ctgggtaggc tggatctctc tggcgcggaa gatatacgtt tactgattgg 1020 tttctgttcg cagtccatcg tcacacccgg cggaggaatc ttcgaagaag ccggcctcgc 1080 ccccgcaaca aagaaggaaa tctagtcgac atgggaaatc ggctcaaggt aagatttaca 1140 tgagcaggaa cttttcacct tccgcttgct gttgttagga tgcgtctatt tactgaaatt 1200 ctatgcgaaa gaccgatctt tagctactca gtcacctccc ccgaaccggc aaaagaagcg 1260 ctccagaact cgtccagatg tcgttatgaa agaggcagat gacgaattag aggaacggga 1320 gaaaagcgag gaacatgagg cttccccacc aagtgacagc aatgatggca cgaacccttc 1380 aggtetegae gatgaggaeg aagaggaaga tgatggagat ettttteata acagtetgtt 1440 cggagcgcga ggctcccttg gactccagag tactcttcgt gcccttagcg gtatgatgtc 1500 gggcatgtca tecegeetae gggatateet ecaaaatttg agaatgaagg atgaeeegte 1560 agttcaactt atcgcccttc aggagctttc agatctgtta cttgtatcga acgaagacaa 1620 cctatctggc cagttttctc ctgatcctta cgtgaaggag ctggtatctc tcatgcaacc 1680 aaatgatttt ggggaagaga atccggaaat aatgcttctt gcgtgccgtt gtttggctaa 1740 ceteatggag geettaegeg getetgtgge caatgtegtt tatggeggeg etgtaeegat 1800 cctgtgccag aagctactgg acattcagtt cattgacttg gctgagcagg ctctcagtgt 1860 atgtcccttg cattitictt cittiacict tgtgcticgt gccgicticc gtiggittit 1920 gacagtacat cgctgacctt acgacagaca ttagcaaaga ttttcggtgg acttcccggc 1980 gtccattgta cgagaaggag gcttaacaga atgcttaaca taccttgact ttttccctac 2040 gagtacccaa cgatccgcag taacaacggg cgccaatttg ttgccggaat ttggcgtacg 2100

attecttece egetetgeg agatgeaty eccaecetee atgaaegtte tatetageaa 2160 tgatecgaag geegttgaac aaggetgeet atgtgttet eggatagtgg aaagetttag 2220 acacaaacea gagaagettg aggagettat tageeeggag atgetaaagg eggteetteg 2280 teetgetgetg ecaggeacea caaaceteat eggacegeae atteatacee agtteetteg 2340 agtteetggea ateaeggeag aagetageee eeggetgteg gtagaaetge tgaaaacgga 2400 egtagtegae acteeteae agatettgae tggagteteg ecaecagaaa acattgatga 2460 ecaagetate aagatggata gegtaettgt gatgeagget tegateae ggeegaagga 2520 geaagttace gaaacactga atgetattg tgageteeta ecaggtgtee eeggegaegga 2520 geaagttace gaegetggta ateeegaggt egetgeaaea teggggteea ageeateete 2640 ateegaagggg teagetggaa aacgaeggte tettgeteaa eggetgaae 2700 aeeggteegee teggteetge teeecaacet eaetgatgeg tetteetagea eggteaaeet 2760 ggaagtaeege eaaaaggtte tetgtgeegea egteaagatg tetgeaaaate tggateetge 2820 tetgategag gagg 2834

<210> 3028 <211> 3795 <212> DNA

<213> Aspergillus nidulans

<400> 3028

cggggctgca ttagaagcct ttcgtttcca gaatggcctc ctctcgtcac catttgtctc 60 cccagggtgg gggctaggag acctcccagg ccgtccacgg gacggtccag gaggtcatgt 120 atttggggtc ggtgtccttg gctagacggc ggacagcatc ccgtgatccc gagactcggc 180 ctaccagttc agcgacccgc gcccattcgc gctcctcggc ctcatttgtc acatggcgct 240 gaggggggaa ttgaagtgcc gtgcttgggt gcagatgtct cggggaatga ccctcatcgc 300 cggcgccctt ggaggatgag gccttctcca agacgcgctt ccaggacgta aattcggact 360 cattgcgagc gcgtagatgc catacttcag ttccggagtc gatggagatc tcgcgagaag 420 tctcattgca ggccacagcg gctagactca acggaattga gccacgcaga gtagcagagt 480 tggcgtcgtg gaaataggac agcgtagacgt tcgaaaagtc gagggagaag aaccgccgcg 540 cccatccctg atggcgctta cggcgacgct tgagcagaag cccggtgtgt attgttgcc 600

catctccctc ctggacctgg atttgcggcg gcattttggc cattatgcta ttgccccgcc ggcgcgacga tgaggactcg gtatcaccac ctggttggct ggccgcatgt gtagtaggaa ccgattgtgg aggtagagca gttgggtaag taagaagaac gagggtcacg gttttggata 780 tttgcttcga aaatgtgttg tcaaagacaa gtgcgtaatt tccgccctcg ttagggggca catcatatgt cccctggaca atcttatccg cctcacatct gccaacccat cgaatctgct tcagacccat ggccgtcaat ttgtcgctaa gcgaacgcga ggcactctgc ctcgagctgg caccgccatt tgcgaggttc tcactcgaat cgttgctcgg ggtatcagct gaggtcagac 1020 taggggtact gagaatgccg gactggccgg gatgctcata catgccgaag ttcagcgact 1080 tcttgtgcgg ttgaatgctc caagagatgg tatgcgcgga tttgacgggg acccagcgga 1140 cgaagtaaga ctgtcgggta gatcagtcgt cggtcagctg cggaaaccat aactcttgcg 1200 cgttcttggg gtcgtacctt gctatggact tcaagctctt ccatggctgc catgactgca 1260 cgagcgaaca gtaggaggtc actgaccgtc aggaggaagc gttgacggca aggagccgca 1320 attaaaggcg cgatggaggg aacgggggtg taagatgggt gggtagggga ttatatcggt 1380 gcctgaggac gttggagagg ggtggagcgg gttcacgaga ccattgacaa tgacggcatg 1440 ggacaacgag ataatcatgc aaagaagcag gtgataacaa ggacaaaaga gatcggagaa 1500 tatagtagga aatgagaaag gggaatgaga atcagccgaa tggggcgaaa gcggcagact 1560 tgtcatcttc cgcatgtcat tctttcataa ataatgcgga gatcttaagg ctgtgggacg 1620 gagecteeta taaacaeeca ggaaceteag ggeategtea eatgggetgt tgetgeeatt 1680 caggaaccgg gcattccgac cattataaat ctattcaaaa tcaattcttc agtggagcac 1740 ctactccata attacttgga gtaaagtgga tgatccaatt caacggccaa gtctagcttt 1800 cgtccttgaa gtagtagtat agtgacctta tccccgcaaa atcatagaaa atattaccca 1860 atatagaaga aagatatget aaataagaat atgeaaacae ttaaaeeett gateeeteag 1920 cgtcgtttcc cgctttgcat gttagtgaac aacagcttga atccattgca caatgcccgc 1980 atgtctggat aaggattgcg ctgcagctcg tacccttggg gaatcacctt gaccggccag 2040 ctatgcacct gcgcgtgctc tccggccttg aagcaaagga agaagtaccc ggcatgcttg 2100 gggtctatgc agaaggcgta cgccgaccgg cgcgggttag ccttagtata ggtctccagc 2160 cactggtctg aactgccgtt agtactcaat tgaatgtaga atgtaggaaa gtgacgtaca 2220

ggtcgaatct ttgctgccct cctggtattt ctcatgcagc atcatctcat CCaccttctt 2280 ggccatagct ttgacgtggt tgaagatcag atcatccaga tcactgtacg taaatcgacc 2340 cccaaccttg agtgtacgcc cgacggagaa ctcattctcc ttgtccagct ctagcacatc 2400 aatatgctgg aagatgccgt ctgccacctt ccaggtgacg gccaagtggt cgggtccctt 2460 tgaagacggt cggataacca cgtcgccgcg actctgagac ccgaggaact ccactgcctg 2520 cgtggagttg aacggacgga ataatggatg tttgatgaca cgcatcgtac gcccgccgtc 2580 ctgtgtcttg gcctctaacg cctctcgatc ctgttcttcc tgacggtaat cccattctcc 2640 cgcgtgtgct cggtcagcgg cgggcctgga cggccggctg acttgttctt cccgcagcga 2700 cacgttacac gtaaaggtct tgcggttcag gaacatcacc ttggccggta ctgtttggtg 2760 tagggagtaa attgctctta cggggatgtc gtaacgatca gtcatctccg attctccaac 2820 aagtgcgtcg acaccgcagt ccagcttgcc ttcaatgtgg tcgtccctga tgctcttgat 2880 agagateggt accaecatge ceteegeeaa tgtetgtget gteteacegg tgageatggt 2940 gaagatgtcg tctgtgctaa ggaagacaaa gtgttttcgt agctcttcgt aaggctgctg 3000 gagttccgcg cggatggttt cgagcgtggc ccgctttcgc tggttgaggt tcttctccaa 3060 ctgttccgcg tattcttcaa ggatcagatc atttacacga tcctgagcat cttcccggaa 3120 gagettgegg acaattgeac egggeeegtt etegtetgtt tetgeettta tateetette 3180 gtccaactcc aacgcgtccg ctgccatctt gcgagcgata tcgtagtctt ccggatgcac 3240 tegagtgttg tegaggggat eegagtetge gteegegett tegtagtega tatacagaaa 3300 actegeagag tigticeata etittaetee catggeaggg tactgtaece caacteeaag 3360 cagagaaaac cggctgttaa ccacacctcc agtcatgttc actatcttta agaggtgtgc 3420 tgctttgcgt gggcccaggc cgcatacgta tgggagaagg ttggcagtag ccgggtctga 3480 cacagetteg ttgatatega etecaaceag gttgaceatg tegaceageg eggttteaag 3540 ctgcttcagc agtagctcct gcgccaccag ctgctgccca ggcttgaact gaatggacac 3600 aatgtctcga cccagcgaag catactcctt tagagggctc tgcagatact tggcaagtcc 3660 tacacaataa tgagtgaggg gagcgaagct ggggtggtct ttcttagccc gatcactgtt 3720 ttaatagagt cgcgccactt catcgttaac gatcactact tccagccggt cactgacctc 3780 cacatcacgg tcgta 3795

<210>	3029
<211>	1559
<212>	DNA
<213>	Aspergillus nidulans
<223>	unsure at all n locations
<400>	3029

atagtggatt gcttggcttg gatggctcag aaagggcggg aggagatagt gagggttgtc 60 gactagcgtt atcacatggc tcctctagag agggcgtaaa cggcgacgga cgggtttcat gagggtctgg actggaaggc agtcgagtcg acacggtgag agtctccagg gtgaggttga 180 aggagcaaaa ggcaaagggg aggggatgaa ctgagaagat gagcagaggc ggaagggaca ataataagaa gtgagaaaga caaatggcag tcagaggagg ctaaagcagg gcgggctctt 360 attggcagtg tatatacaag ctgcactctc tatctgacca agcagatggg gtaaactccg 420 480 accgagtgca ggacagcgcg acaagtggcg agttgctacc gagcggggag ctgagcggat gacatgcaga actgggttcc ttaaaagaga agaaagagag cgagagcgga aaagctggag 540 600 actgcgagtg cgagtgcact tcatatgggg atgccagcaa atctgagggg agcatgagct ggcaggcggt cactggaatc gtccaaatgc ctcatattat gcttgctata ccttcctggg 660 tcatatacag aacgagatgc gaaatgacaa ctcgagcaca gtaaataccg cccagtggag 720 caaatccagc gtatttacag ggtcttcttc aaaaacaaac cctcctatca ataataacag 780 gctgacaact gacgagtgac aatgattctc atcgattctc tggactcaaa cagctgaatt 840 gaccctccac tgtgctacat gaagaacaag ttgatgcgtt ggcagcgcat gcatgaaggc etteegetet cetgattegt egeeegeeee eetetgegeg tettgetgte eaceaagaee atccatccaa aattcgaatg caattcaaac catggcctct cattcttgcg ttgaaacaag 1020 atcgtcccgg acgaaacaaa gtcgtagctg tcccggctac cgttgaaagt caaattacct 1080 ctaccaaaag gtattacgag ggactcagct tcgatctagt tctccacggt ttcgaatctt 1140 tcctgtgaag cggaatcaat cagatgtatt aatggcaaca gcatgtgccc tcttaaatca 1200 actecatete tggeteettt atgtatataa taagggtaaa tatgtteget eetgteaceg 1260 ccaaatteet ettatteteg categgteea tegtageegg eggggtaeae tteaegteet 1320 gcgctgtgtg cccctcttaa aagcgtcagg taccacttcc tcgctggact tctgtgcggt 1380

ctagtcaagc ggtggaggtc tgtaaccgaa aagaagcagt catgatttta tacaaccatc 1440 cgctctttga cggggttgca gtcacccaag acacagcagt agaccgtagt cgcagtattg 1500 tacctagttt tatcgcttag aagctaataa tagnggcgtt atcattttca tcatatctc 1559

<210> 3030 <211> 2396 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations

3030

<400>

gattatggtg acactataga atactaggat cttaaacgtg ctcctatggc tttctqtcat gtacttcacg gatctcggat tgcgagccgg agagccggtt tctggtaatc tgcaaagccg 120 acagctgagc aattgggcag gcagcttaca gcagcgacgc gtgttcatac atagcacgag 180 cgctgtgtga atgtttgatg gctaatctag aggacgcaac gcattggtgc ctagggtcgc 240 aacagcgctt agatgctcct gctgaagcat ggggtattgc aaccgtttaa atgctgggat 300 ttccaaagtc tagaatggaa cgctctgttt aacttgtggc gaacggtaca tntttcaatt 360 tgctaaagcc aatttgagat taactaaata tagaactttc caaaatggaa gaagcggcca 420 accaacttga tcaatatcat ctgccccaaa tatttgccca gcctcaccct gtggcctgtg 480 ctctgcagcg actttataat gcgaccaata aacacacagc cctgtccagc attacaaatt 540 aaaaaaacgc catggatgcc aaaagttaaa caatacatta ttcacgtggc ttagcacgct 600 acacctgaac gcctgtccat ggcagctttt aaatgttatc gccctgcagt tgcctcgatt 660 tetcagetca teaggeggag agteaatege etttttttt tttttttat egaaggatat ggctagagta ctatggcttc cagccggcct tgccacagtc catctcaatc ggatactcgg 780 cttcattgag ccccaaggtc cgcctttgca ggcttcctac cgtagacaac agtactatca aggtcagccc agcgcctgaa gatatttttc tctctttctg agggaaaaag ggcaacagac cattectgat atgeatggat tettggagtg egaaggeeet ttegeatgeg egaeagatat ageteaactt ettegegtga eeactggata gettageeac agteetggat aetggaeggg 1020 gagtgtacct tgagaatggt ggttaacagg tacatgetee atecetegat ecettettee 1080 cacagcagcc ggttatatag tcccagctgc ttaagacggt gatcgctggc ccatccgcca 1140

atggggatct tgtatcgtcg ctcgaccacg tccacaaaac cagccttgat catcctgtcc 1200 ctggactcgt cgacgatcct caaagatttc ccaaacgcct cgccggcttc gagagagacc 1260 cgtccccatt cctcgaagat cgtccccaca gtagtcccgt cgtccgactt tggtactacc 1320 gattgctcga cttgctcgat ccatccgccg ggcttgactg atcttgttcc ataggtattt 1380 agcacttcag ctcgccagag ggaggctcga cgtaccgtaa tgcctgttta tagaacgcgt 1440 cccagtccgc gacgcagccg tacagtccac ggatgtgtac gaaatcgaac gcqttgtctc 1500 cgtacagcca ttcgtcgcag cagtcgtcga cttcgaactg gacattcggg ggaacccaac 1560 ggggctggat tgggggagag atcggttccg ataaccgctg aggaaggatg aaggtctgcg 1620 aattetetge gegagtgagt atttataaac aatteteagg etgettggga tagggtegeg 1680 actatacact geocagatge cegtecetgt eccaacateg aggaetttet gtgcaaegte 1740 aataccgccc cagcctcagg acgcggtcga tcactcacct gcgcgtcgtc cgggataggc 1800 gctagataga gccgtccgcc caggacgagg ttgtagacat ggtgtcggtt tgttcgtcag 1860 tettgegeag eeggegtgga tgggaattae teaceegaaa teeagatggt eetgegeett 1920 ctcatcatta ggtcccctag tgaatttaat ttagaaggat ctctaatgcg acccggctcc 1980 tgctcaccag tatgatccag cgcggtaagc atggtagcgt cgcccgttct cgtagcggta 2040 atccacaata ctgctccgca gcgaggtcaa ttccctagcg cagcatcagc gaccgcgtcg 2100 atcagggtcg ggtcgtataa gcacagacga gttataatca tcgctataag cggaatccgt 2160 gtcgtcggga tgctgacgtg ccgaaaagaa tcagctccgc tccaaatcta aatatatggg 2220 gtgaagccaa agtagcgggg gaagctaccc ctggcctaga gaaatactgc taaaaaatga 2280 aaaaacaaaa aaaaataaaa taaaaatttg gaggaaaaag gggtaaggga cggctcgcac 2340 attgatgtcg acctcgagcc tgtattcctc aaccatgctt gatggatcaa atcact 2396

tacgtgccta catagtagga ttgcataatc cagtgcagga tgccgtggac ccaggtgaag 60
tttccaggcc cgaaaaggta gagggcgctc gggactgacg tagtgaagta gaggataaga 120

<sup>&</sup>lt;210> 3031

<sup>&</sup>lt;211> 3107

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

<sup>&</sup>lt;223> unsure at all n locations

<sup>&</sup>lt;400> 3031

tgtgtgagca tgacaacgtc tgtctcgaca cgaactatct gtcgcgcagt cgcaatgtag gcttgtatta gcctttttag tatgctaggc aattttgcga gatctttcat gtcccaggtc acgaagacgg tgggctcgaa ctcggccgct tgagtgttgt tcagagcttg gaqtctcaqt 300 attgtgtctt tatcggaatg tgtctgattt gacgcatttt gggtcgctat ccaccttgtc agtatgaget tactegggee etgagtagag egtggacata cattteeete tgtteegtge tcccgcggga tcgtttcctt tttcttcggg ctgaagactg ccactgctgc cqtqqatctc 480 ggcatcatgc aaaagagtct ttaaaaccag cagatccggc tcggttagat ttgggtctat 540 aaaattggag gggtccatgt tgggatggcc tccttactca gagtgcggtg ggttgtcaga 600 acgtgcagaa gactgtcaga atgttaaggg gaagctacgg gtatcggccc atccgtcagg ggccagatcc ttagacttgt tgcctaacaa agagcctcac aatggtatct acattgcggg 720 aatcccaaac gttttgacat gtagggagaa gaaacctagg tcagaatatt atatacaaga 780 cctgcagaca gttgcttaac tagaccaatt agaaggtgaa aaagacactg acaggatctt acttttccgt aaatgtgctt agtaagagtt gaagcatgaa acctcgaacg gtaagacgcc 900 actictacaaa catgetteac gaacaggate tteggeette teggegggag caaatettga gtcagatgcg ccttcccgat agcttgtcgt taccttaggg gctcgagtag cgttggtgga 1020 attgactggc acccatgcca atgccacatg acttgaccaa tcaaattcaa tctacggatc 1080 tacggatcta ccccacgata aaaaaaaaat tggcggggtt gatttgaaga gagggaaqct 1140 gcattcagag caaaggcaaa cgcagctttc aaactgtgaa aataactgct cttagacgag 1200 ctgtaccttc tatatctagt tcaagtctca gttcggccac tgttactaca atgactcttt 1260 caaagttgca aggggtcaag ctccccgcat cggccgactt ccacggtgcg tatgaaccat 1320 ccactccatc gcactgctat agtcaactga tgagggaaaa tagtccacct ccgcgatggg 1380 gacatgatgg aattggttac ccccaccatc agacaaggtg gtgtcaacac agtcttcgtt 1440 atggtaagga gataacttta ctgggggacg agaagcaaga gatgaaacga tgcgccaact 1500 gcattgattt gataagaacg ccaaataaca tctgatgcta tgatagccaa atctcgtacc 1560 gccagtcacc acagtcgacc gtgcgctcga gtacaaacag cgtctgcaag cgattgagcc 1620 aaacgtaaat ttccttatgt ctctgtacct gcacgagtcc atcacgccgg aaactatcat 1680 cgacgccaag aagcgcggca ttacgggagt caagagttac ccggctggcg tgacaaccaa 1740

ctcctctgcc ggtgttgtcg actacgagca gttctaccct gtattcgccg aaatggagcg 1800 ccaggggatg atcctgaatt tgcacgggga ggttccctct cagggtgatg tgaccgtgct 1860 ctcagccgaa gagcgcttcc tgcctaccct cgtgcagttg catgagaagt tccccaagct 1920 ccgtattatt ctagagcatt gcaccaccgc tgcggcagtg gaagctgtta agaagtgcgg 1980 gccgactgtt gcgggaacaa gtaaaatcgt accttctggg ttccacgtgc aatattgtct 2040 gaccgtgttg tagttaccgc tcaccacctt tcgattatta ttgattcttg ggcaggagac 2100 cetttetget ettgegagee tgtegeeaga acceetgetg ategagaege tettetgege 2160 geogetgeet eeggeaacte taagttette tttggeteag atagtgeace geaeceegea 2220 gettecaaga gaggaggaga gaagategea gegggtgtat teacceagee gtacaegaen 2280 cagetegtgg ttgacgeett egageaggeg tgeegaaacg gegttetgaa ggaagaagat 2340 atcacccccg agatcatcga gggcttcatg agtaagttcg gccgcgcttt ctacggcctc 2400 gaggagcaga aggagttcat tatcctcgaa aagaaaggcg agaaggtgac aaatatactc 2460 aagteggata aggtggacgt ggteceatte agaagggate aggagacatg gagettgget 2520 tggtccgcat agagcgcttt cagctgaatt ccataggccg caaaagtatc ccttctactc 2580 ctcctttcta tccgcctgtg taagcatact agtcacggcc tcgagtgcct gtgcttcgga 2640 gatgttcact ctgcgtccgc caacagtaat gttcccatca ttaccaggta gctggccaga 2700 ccgctcaaga tgtagtctga ttctgctttc aatgtaatct cgtctctcat ctgacttggg 2760 ttccttgtct ttcgccaggc ccgattccgg taaagcggcc agcttaggcc ggagctcttt 2820 tagcatcgct tgcagagcag gaagttgtga caaaatgaat gtagttttgg tcgtcaacgg 2880 tgtgtgctgc tggttcgatc ctgtggcaac gccaacgcgt gattgctgag cagccggact 2940 cgctgtcaag aacgacaagt ccagatcttt cttcgtaaga gacgtggttc actttctttc 3000 gtgtccgttg cagcatccga ggcttgcgtc gctgacaaga tcgctttaag ctgcgcgatc 3060 attacttcgt tcctcgcgct ctcctgcttc aatgctcggt ttagttt 3107

<sup>&</sup>lt;210> 3032 <211> 562

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

<sup>&</sup>lt;400> 3032

60 gcatgactga tatagtggcc tcttcaccat tggcttggag ccgggcttca tccccggtcc atgagggcga cagttccaat ccagcttctg cgtatagatc ccagaacaga cgggaggcgt 180 cgaggtccat tgatggtctg gtgaaccccg accatggcca tggcatgccg aggatgacct ggagcagtgg ggggcgtctc cgtttgcttc tttggctagg ggactaggtg ggggtcttag 240 tcggggactg cgtgggaagg aggataggcg gaaccaggga aggcgccggg gagctcgaCg tttgttccga agaggtcttc tatgaatcaa gttcttagct gagtcgggct tggttaaatt 360 ggacgctaat atgaatggct acgattatac tatattgtta tataccctga tcgtcaatcg 420 attatgtaca tacattcaac ccttcaaccc tctaccctct actctaaaga gacagggacc 480 togtacgaaa coctactgat coctttctgc ctactaatct toctaatcac aatcettccc gttcttttcg tgctcagcac at 562

<210> 3033 <211> 2093

<212> DNA

<213> Aspergillus nidulans

<400> 3033

tggggattat tggctgtgta gaaagactta ctgttgatat attcatagcc caaatccttg agtcctaact tcacgacttg cgctgcggca gtcagaatta cagttgcgtt gatgtcacac tegtgegeat tecaagaget ceaacetaga getgggagge ggeeetatat tateaagtga 180 ggtcgggtca gttaagaaag cttgaactgc agcggaatca gggtgagaag ggtgagagag gaaggaaaga caaggatata ccact-ccgtc aggcctcatg agcgcgttgg ctcgggaaat 300 cagggtgatc agtgctagaa actcgatcat ttcgcacgtt actcctggct gatcgaggta aaggaaaatt tgaagaagca gcaggaatca tacggtcttt atgccaggca ttgcccagaa 420 ctgcaaggat gcaggggtgt ttgtctctct gaccaaacag ccatgcctga ttgggactgg 480 aatctagtct tcgtgatcaa gagcttgttt gctgtcacct aagaagaacg gctaatcagg 540 ccgcttgctg ataagaaaga aagcgacgac ataattgaaa cggattcagt attgacaagc 600 gcaagcccag ccctaacgcc acatattcta gggaaacaga acagcctata agaacaaaca 660 aacgcattca gggaaattga acaaagcaaa acttcatcta gcaagccagc atattcacat 720 ccccggatcg ccgcatgcac atgaatggat ggcatgaact attggctccc cttctccctc 780

ttcaacccct cttccacctc cgtcaacagt tgacttaatt ctttcgcgcc ctcactgttc 840 ttgccctcaa gctccaaccc cctcgataca aagcttttcg cctcctccca cctccccatt 900 tcaaccaagc actiticecce gegecaecaa geettaacat tatteaeggg eegteeeteg 960 acactageee tggcategae aageeeetea acceacatet getgegaeat gtaegeetgt 1020 gcgcgattcc catacaacgc agcgagttcc tccctagcca Cggcaacggg ctcccagccg 1080 ggccgggcga gcgccatttc gagcgcgaaa gtgtacagac gcacagcctc ggcgtagttg 1140 ttcttgcggt aggccatgtt agcgctgtcg cggagtttgt tgatttgcgc ggagcgtttg 1200 gggttgaggg gtaatggggg cgggggaatg gatggggtgt ccaggcttag gagggtgcgg 1260 tggagggtgt tgagggtgga gagttcggcg ttcagggcag ctgtttggga aggcgtgtat 1320 gttgaggtag cgttcgggga gagggaaatc gctttagatg acgggtcgat tgttagagga 1380 tattgattga agagatcgat tgattgggcc atttttgttg aagtctggtg tggtcgttga 1440 ttattgtgta ggtatatgat ctgggtggca ttagcatgcg gaagcacacc accagatgga 1500 acgtaccggt tggagagcaa tattctagag cgcgtaatat ataagccctt gggtacaaaa 1560 gccgaacctc gaaaaaagaa tatatttagt ttgtgcgttg agtgatcagg gggataatct 1620 aaatagcttt ttgaagtcga tatccgcaag ctgtccagac cgggcggtgg cctgaacaat 1680 agatggttca cattcaaggc ggtgggaaac tgccatatag taactcgtac ctgaagagtt 1740 gaaatatgtg tcagacgcta tattctctac caggctgaaa attcagattt agttatacat 1800 tcaagtcaaa ccatacaaga atccagtctg agagtcatcc aatcgtcaag aacaacactt 1860 tgcattggaa agggaatcaa ccgccgcaaa atcatcacat cgccagaaat cgcaaacaca 1920 tacaagttca gcaaaagtcg cctaaaacac gtaatgcagt acaggactaa gctgattcaa 1980 aggegeecaa eteegeteea tggteatate gggggattte gaggaaggaa gtaateggag 2040 gagtggtttc ggagtaaatt agcggtggcc gtacccgctc acagtagagc cgt 2093

<210> 3034 1832 <212> DNA Aspergillus nidulans <213>

<400> 3034

ccgagcagac ggtgtggttg ttgaattggg gcactgtaac ctccaattcg acgaggctgt

caaaattett getgeggtea actgttttet egetgeegtt ttetteeeeg ttgtegatat aagttctgac agctttgttg tagacagaaa gaattagcga tggcacgagt agataaacca 180 240 gaggaaaaca tacccgacaa taatatctcg tggagtaaca cccccccaag cgccatcctt 300 gagctcgtct actccagaaa gagtagcaaa atcgttgtag gtgtcgccgt gttggccaca cttgacgcca gtctgtgcat tctcacggca agatctggac tctccgtcag ggtcggccag 360 cttgtagage ttgececegt ageaggeegt tgegagettt teateateae egteegagte 420 tgacgtgcag ctgcgctggg tgtcaataat gaaagggtgg tgcccggatg cctgccacag 480 tacgggaatg gcatatecgt acaaggeett egegaaggeg teggtaactg tateatttee 540 tgtctttccg tcaaatccat ctccatcgct aaggtcactg gcaccgttga tgaagtggcc gtccgctaca agagacttga gcgttttgat agagtcgtct gagccgtcga atagcgtagc 720 caagcccatg gtgttggccc tatcccagag accagcgctt tggcctaggt aagtcataaa egegtettga teateateeg aceaategte getaggtttt egagtgeget agttagetat gaaggtttta tcaaaagacg gggtcggaag aaaagctctt acggatcctc agtactaaca aggetegtge ceacetegae agetttgeee aaaataceet gagtgattte tteegettte 900 gacttgccct catcacccag cgaagcgata ccaggcagct tctgtagaac tgttgtctgc 960 gtcaaaaaac tacatgggat ggctattcga gaacgaaaca cataccatat ttgaagaatt 1020 aatcgtcctt tggtggaacc ggagcaaatt tcttcgtaaa gtctttgagc gaaggatcaa 1140 ctaccagggc catggccgac acgagaccgt catggtacct ttgatacgtt ttactgagag 1200 tattcaagga ttcccagatg agcacttcgg cgggagaacg gccatcctgg cagtcgatat 1260 ttocaccgca gccttccaca atttcccagc acttaccgta gccctcccag tccatcatgt 1320 acgccaagta tecegtgaat gaegtttggt teacattgte eeggtagtae ttecaggeet 1380 tcaccatgtc gtcccaggct tggtcgacgt cgagcgcggc ccagcgctcc gaaggagtgt 1440 aataaggegt teeetggtag taattattgt cacaggteaa getggaeeag ttaeegteet 1500 gaagattatt agattcaagg ggattctgct tcgccatgat tgcctctttg taatctgacc 1560 agttgcccac tggtgcgtca tgccaggttt ccaggtccgt tgcccagttt accgagccac 1620 ccatgttcag tgacttgtat ctgctgactc gggactcgcg gacctctggg ctcatgtatg 1680

cgacccattg	gttgtcatcg	tagacaagga	tgttgctgtc	gctgtcctca	tcgaggtagt	174
gtgcggtaac	gcggcttgaa	gcagtgtcgc	gggtattaag	ccccgaagga	ctaccgctga	180
ggatcctctt	atcacgccat	agcagatagc	ca			183
<210> <211> <212> <213>	3035 553 DNA Aspergillu	s nidulans			·	
<400>	.3035					
cttaccatca	ggtagttaat	agggatacat	ccgacaccac	gaagccaacc	ctccatgtag	6
gagagaccga	tgttcaggtt	cttgcggata	ccgtcctcgg	tgatctttcc	gggaacgttg	12
gtgttgagga	ggtcgttggc	ggtgatgttg	acgtcctcgc	ggcggacgtg	catctgattg	18
ggggtgggca	tgtacttgtt	gaaaacttca	ctggcaatcg	aagcgagacc	tgggtgcgca	24
acccatgtgc	cgtcgtggcc	tgcacgaact	tcacggagct	tatcggcgcg	cacgccttcc	30
atggccttgt	cgttggcctc	ggcgttgtct	ttaatgggga	tttgagcggc	cattccaccc	36
tgcatacgtt	agtacggata	ccgaactttg	caaaagaaag	ggcataccat	agcgtggact	42
cctcgcttgt	gacaggtctt	gatgaggagc	ttcacgtagg	catccatgaa	aggtacggtc	48
atggtgacat	cagagcggtc	aggaaggaca	aagttggggt	gttggcggaa	tttcttgatg	540
aaggagaaga	tgt	•	·			55:
<210> <211> <212> <213>	3036 779 DNA Aspergillus	s nidulans				
<400>	3036			•		
gatatagact	actatgcgcc	ctcctggcat	tacaccgaca	ggaacaggaa	caggagcacc	60
aagtttttgt	cgagcaggaa	ggcgagactg	tttatgacac	cgagctcgcg	actgagcttc	120
gaattgtcat	gtacgggacg	tagttatgat	tcgcttgaag	agtatgcata	tctggcgctt	180
tgttcctatt	ccattacgtg	ggctatgggt	aaggttattg	tactattata	tttgcaagat	240
ttcaggtcag	ggcgctggag	gtatatatct	ggaagcaata	agacccatat	tcatcgtcat	300
aatttaatat	ccatagatta	aatatatgca	agtäctatgg	gtataagaat	aagtattaaa	360

agagtatgtg aaacaaacag acatccaccc aaaatgccca gaaactccga cttgtaacga gaatcgtatc atcgaaagaa aataggctag agatcgtcct ccggcgcaag gtcccattta cgagttgcca tcttcctctg cttctttccc ggagtattga cagcggggct tttgaacatg 540 ctatcagcta gctttagttg gtccatcttg cggagcgcaa cctcaatgtc gctctcacga 600 cccaggatat ttgcgttgcg ggaggtttcc agcgcacgat tttttgaact agatttcttc gatggcgatc tgcagttcaa ttcacgctct aaggcggtta tcttactgcg cagtcgqtca 720 ttctcgaact cgagttcttg cactcgctca tcggaggatg gttgcggatc ttcgtgaac 779 <210> 3037 1767 <212> DNA <213> Aspergillus nidulans 3037 <400> 60 catccgccat catgcctaag gtaagatata ctaggaggct caatgttttg actgccacta acactaacac gtttgtgatt cagatcacag agattttctt cgattgcgat aacaccctcg tecteteaga ggaactggce ttegaggeet gegeegatet egeeaatgag atectegaaa 180 agcagggcct caccgtccgt tacaccggtg aagagctcat caaagacttt gtcggccaga 240 300 acttccgtgg catgatgcag tctcttcagg ccaagttcaa gttcgagctc accaaggagg agctcgagtc atatgttaca aaggaagaag acaaggttat cgctaagctg cttgagaagg 360 ccaagccttg tgttggtgcc actgagcagg tcgagaagct cttcaatgag aagaagtacg 420 atctcgccgt cgtttcctcc tccgctctgc gccgtgtccg tgcttctatc cagaaggtcg 480 ggcaggacaa gttcttcgac cacgacaagg tcttcagtqc cqccacttct cttcccaagc ccacctcgaa gcctgaccct gccatctacc tccatgcgct cgagaagtgc ggaaagacgc 600 cagaggagac tgttaccgtt gaggacagta tttctggtgc tctgagtgca attcgcgcca 660 agattgcagt cattggctac gtcggcagct acaccactca ggagaagcag gaagaaatgg ccaagcgtct cactgacctc ggcgctcagg ttgtcatgag agactggagc gaattccctg aatgcctcaa gaagatcgaa ggcgaggatg cttccgtcgc ttctctttaa gttgctttcc 840 900 aagttteggt tetacaegat gteaegaeag egggegeatt teetttette aatttegggt

960

atttcatttc agttttctga agattactct acaaacatgc tcccgcactt tgcttttacc

aaccgeggga gacggtcccg ctctcctttt tgcggccaag tcttagcagg gagcatatct 1020 gcgctcggcc ttttacatcc agattcttc gggtgggtag acgaattagt gatcccttga 1080 ttaaaagcata tacaggttct gatggacaca gaagataccc ctagtctgca acagccaatt 1140 aaaagagaat taaatctggc ttccggtata ccattttaca gttacttgcg ttgcttaaacc 1200 tactaaaaggc tccctgttcc ccactcttat ccaattaaac gagggtcggg accctaacca 1260 ccacctttaa ttccgttgga cacctaaaac gcttaattgg aagcaactca tccaaagggg 1320 ccccctaaac catattctt tcccagatga aaaacctacc cattactctc ccactgttcc 1380 atttgtgccg cttttctatg aggtattaac cggtattcc cattacatt gcccaagtct 1440 tttattcaaa ccactataac tgtgaaattc gttcatcta tagacaatcc tacttaatat 1500 ctggattcc cttattccg gtttcacgtg ttcgttcat agtccataaa tcttacttct 1560 ctctaatata cctttcact attcttct taccttatta ttcctttata ctctttata ctcattctc 1680 ctttaacttt tatctttat ttcttcact caattctac ttttcactc tcattctct tcactatt ttttcactca ttcctcact ttttcactc tcactattt ttttcactca ttcctct tcactatta ttttcactcc tcactcttt 1740 ctacatattt ttttcctcaa ttcctcc

<210> 3038 <211> 1705

<212> DNA

<213> Aspergillus nidulans

<400> 3038

gccgtcaagt aaaagccgga tctacacgga aatgttccta gagactatgc ggaacgaagc 60 cagtacaggg aggagtttgc aggcatcttc gggtttccgt tgctttgatg gctaatcagt 120 gatcgatgtc tttgcttcct gcctttggag caatgggagt cactttatat cttgaatgta 180 atatctcaag agcccttgat cttacctccg tgccagtgcg gccttgtgta gtgggcattg 240 taaatactgc ttgactgcgc atgataggct gatgccctgt tcgacgagct acactggcca 300 gtgaacaaca aggcgccatg gtaatccacg tatcagaatg acaacataac taggaaccta 360 gtgacagccc gccgatgaat cgctcggatg taactaatca ttgaatttct gaatcagctt 420 caatggcagc tgtcccgaat agataatgag ggctccgttc attcaaatag cctcctactt 480 agtaaatata cacaaactca tcgttctccc ggtctgtcaa atccaagaac gcattattcc 540

cagtetgetg gteetgacea teeteaceeg cacceacege geteteatee gaateegeet ggtgaaagtt cccatgcatc gagcggtcca ccatttttgc gggcttccca tttgccagac 660 gccgccgttc ctggccttta ttcatccaga acagcagcag ccactgcatt cctacgacag 720 caaccaaggc cgaaaagata cctaaacagg cctgcaggcc cgggagatac tctggcgagt 780 cettgtegtt gaagageage ggaceeacga tgttteeace ageegaggea geetggtata gactcgtgac tatactttgc ttggtcatac cggcggtgtt ttccacaacc cacgcaatga 900 tgatcgggtt cccgccgaag aggaaggcaa gcaggtagta ccctgccatg agggctccct 960 gtgccgagtc atcgcgtggc acggcgtaaa gaactccaag tcctgcgaca acggggagca 1020 taaacagcgc aagaacaacg ctttttagcc gcgctttctg tgcgagatag ctggccagca 1080 ggatgaatat ccattgaaac gcgccgaatg gcatattcag cagcgtggtc ttgtattgtc 1140 gaaacccacc ccctgaggat caatggacca aagactttgg tgaccccgca ccgatgttga 1200 gcaagagcgc catggcgacc caaagtaagg cttgagtttg agccctgttt gacgacctgt 1260 gcattttgac ttccaagage cgtgccgttt ggttgctcgt gcccgtcatg gccggggttt 1320 taatttattg agaaatttcg ttggtttgtt tgtttgaaac aaattaattg ctgtaagtca 1380 ctccacccc ataggtattc ttgtcccaaa tatctttgta tgataatcat ttgtaaagta 1440 caggtgaggg tettettgte tetteetete tttgtattte etcataggte geteattett 1500 ttatcttttt tcctccacat tttccatcct attcttttga ttttacgtta ctctttatat 1560 ttcatccaat ttcatcctta tctatattcc ccctcatcaa tattatcttt cctatccata 1620 ttttgctctc atcattgttt gaatcttctt accatatctt cttctgttct tatcctctcc 1680 tctattctgt tattcgtact cgtat 1705

<210> 3039

<211> 4865

<212> DNA

<213> Aspergillus nidulans

<400> 3039

gaccgaatct aaatatacct acgacatccg cgcacccata agatcttcaa atgtcggttt 60
tcgcagcggt ccgcagctcc ttggtgtgac tcgacccgtt tcatacgacc gactatgccg 120
gtatcccagc aaatacggac tcaggctcag acccgtcagg tctttttttc gtcatacctc 180

gttactccta aagagctctc agatgccctg aagaagaatc cgtctacgaa gatctcgact teteceegeg taataceett atgegeaget tggtttatge ceaatgaeee tgagggtege acagggattg atgtttttcg taaacaccgt gtaccacaag ctcgcttctt tgatctggat 360 gctattaagg atactgagtc gccttacccg catatgcttc caactgcaga gacgttcgcc 420 caagcaatga gtgagcttgg gattcgacgt gatgatgagg tggttgtcta tgatacggag 480 gageteggaa tatteagtge acctegegtt gggtggacae teagagtgtt tgggcateee 540 agagttcata tcttgaacaa ctacaggtta tgggtgcgcg atggctaccc gacagagacc 600 ggcgagcctc gtcaaccgga gaggacgaac taccctgtgc cttcatacga ctcaaagctc 660 gtgattccat ttcgtgagct gaaggagatc gccaaggagc atcgcaagga gggtgcgaaa gaagttgaaa tcctggacgc ccgatctcag ggcgctgggc gggaactgac cctgagccgc gccccggtct atcctctgga catatccctg gatcaatgag tctcccgttt caggaattgc 840 tggatcctga gaccaagaca taccttcctc cagaccaatt acgaaagatt ttcgagtcgc gegatattga tgagaccaag tetateatca geteetgegg taceggegtg acagetacta 960 tagtcgagac ggcgctgggg ctggccgaat acggtgaccc tagtattcga agagtatacg 1020 atggaagetg gacgtaagtg atcttteete aacgeggett tteatttaet taacecatge 1080 acagggaatg ggctcagcgt gttagaccaa cggatggatt gattaagaag gcaacctaag 1140 cagatagcag cgctgatctg cctcacttgc cgcttgttct tacctcttta tatgacgcgg 1200 tggtttgttg aagtaatgca tgttcagttt cgcgcatagg ttgagcggtt atccatctta 1260 tagagtgtag teetgagtaa eetaetaggt gttttagatt ttetgageag egagateaat 1320 tgctaagcga aataaattgt taaacctaac aaagatgttt acaaagaaag gactataaat 1380 acttccgggc tttctttgta acgagtaaca agatgcttag taagaggcaa caggaaggcc 1440 cgcgagttga tccggtactc cttcggtggc tttcaatgtc ccatcacttc ggccgcaccc 1500 tacgtcagcc ggaaacacaa gatgctgccg atgagaattc ttcatgaact aggatccgac 1560 tgtaagtgca ttgaagtttg gcctcgttcg tcgatggacg cagccgctta tgctgaaatt 1620 ccaacccgct acgcttcccc cacattcctg atctctccgc cgacaacgat ccacaacctc 1680 tctcaagctt cggctgaccc aacgttgtag tcgcagtttc tagaacaggc tacttggagt 1740 agggegtetg egectacage ggeetegate gateacacaa gegeetgegt ttgeegaeta 1800

ccgccactga agcgaacacc atgtcggccg cacgcaaggt cttccactgt gccgtggatg 1860 aaacggcatt aacgacgaac atcagcgaga taaaaaaatg ggccaccaac ggagctatca 1920 ctctcatcgt tcctctttac agtaaggccg tttggatttg acccctgcct gccgcgtcat 1980 ccgctcactc cctttccagc acttgagcgc cttcatgcat tgaagaaagc cggatcccag 2040 gtcgccatca acgctcgaga ggcagtgcgg tttcttgacc gcgcaacctc ggacaaaggc 2100 aacgctgctt ctgaacgagt tatattgcag ggcccgatgg aacagtttga agactggagt 2160 gaggcggaga agttcttttt accggaattt gaggaggaac cagaagctgc cgggagatta 2220 ggctcagcgg acgagccgac tctgcaggac aggcgcgagg agaaggacag tgaccgcagg 2280 aagagcaatg gtgctacgga cgacctatca cggatgctcc tcagcaagct gaatttcaag 2340 aaggaccegg atgeegeete ggetacatet aetggeaete atagtggeee egeeteeegg 2400 ccgtcctcca ggagctcgcg aacaagtcca gactgtgtgt atatcaatgc cacgaatgga 2460 gacgagtcga aggattacaa gagcaacgga caccgccgca ccgcctctgg gtgtactatc 2520 cccgttgtgc cgcccgtctt acggcctttg cttagcgcac ttctttggaa actacacaaa 2580 agtecegatg catetaatge tgetaagget cetateetag ttaceaacga cegtaetaeg 2640 caaatttggg cacaaaaatt tggtattgct gtcaagaaca tccatcagtt gcggacttcc 2700 attcaatacg aggaaaggga atataaaaac cgatgcaaat acgtcgagaa aactcaaaac 2760 aatgagccga aaccettget etectacgaa gacgaaagtg atgaggacga getagtgtte 2820 gtcccccgcg gccgtggcaa aggcgtatcg aaaagtggtg gctcccgtgg aagcaacaat 2880 cgcaagactt caaccactgc caaacccgtc gcgccatctc tggagagtac gatagaaatt 2940 ccaacccaac caatcgaccc caactcgttc agccggtcgc tgggcgtgcc ctcgaagcag 3000 catgccacgg tcgatttgag tacccaggcc ggcgcctcac gtggcttcgc aggcgcctcg 3060 cggaacaatg gaaacaaccg gcgcggaacg tctcgtggcc aaactcgtgg cggcagcccg 3120 tggccgtggc aagctatggg ttccttgatc ttacgatggt ggtccgtcga ccgttatgat 3180 gcgacggact gacaatcaat acaactacgc gattgaccga atggttgcct tatgaagcag 3240 aaaaaaaaag gttgtatctg cctagcccga ctcagttctc tgtcagtttc ctttataggt 3300 aagacatatg ggttttgagc ggatgaccat ggatgcaaga gccggaggat ggaggtgtca 3360 aatacggtac ttattccacc tcgggattcg actacggaga attgtgacat ggcctagatg 3420

ggttcagatt gagttcaggt caggtccagt ccaggcgtcc actttgcgtt cctatgatcg 3480 ctcatatcat gtcatgcctt tactccttta ctttccgttt atcatggagg aaacggggct 3540 gctgtttcat ctgccgcgtg ggtagaaccc cgtgtcccga ccagatcagc atgctttgca 3600 agaggtaggc tattcaacat gctactctta gttagttacc agcatacatc tctgccaaga 3660 caggtgtgct ggaccgtcct tettttattg teeegegttg attttgtegg cateaccaga 3720 ctgagactgg atgtcagtta ccttacttag ctcattgaat acttcacata tctagaactc 3780 ccatatgagt aatcctctta acaaagtgta ggtaggtcgg tttaccccgc gatgatcccg 3840 tgggacagte caateaettg acceggeeae tegetteece teatggeege gacaaceatg 3900 ccgtgacgat gagactgcac tagatcgtac cttgagatcg tacatatatc ccgacctgtc 3960 tcacctccct tactctctac gcttaatcca tccaaagtga actgagaaac atactgaact 4020 ccattttatc tgtaccaaca aaatctattc atttccaacc tatctcccta caacaatgtc 4080 cacctcattc gaaactccct ccaacggcac gcccgcaatc gacacaacct ccctcgctac 4140 ctccccgctc gaacgccgcg actcccttga gaaacacctc ctgactcgtc ccgacccgaa 4200 agacctcaag gataggcata tcctgctcga tacgaatgtt gctccgtacg tccaacgctt 4260 atctgtacta tctccctgta tctgggtggt acgctggttg tacaattatg ctaatcacgt 4320 tggcggatta tccagatcca tccaagcaat gcgccagaag cttgatcgcc agcagctgtc 4380 ggataatttg aagaagagcc tggagcatcg gccagagagg gaagaattgg ttgagcgtgc 4440 gtatecetgt tectatetee attgeettgg gettetteat tetattetee eetgagttte 4500 gtcagactag ttccgcttgt aacactaggc atgtgctgac agttgagctg ggatacgtag 4560 qccatatcct ccccqctqac qaacaqqcqc ctqttaatca qtqatcacct qacaaacaaq 4620 ggccagcgtc tcgctgggat aaattatcat gaagcaggat agatacatcg tctctatcct 4680 tgatgaaata agtttacgtc atctatactt aggctgctgg gacggcttga ccttggttga 4740 caaggaacga attgggacag gagcaaagtt gctggataac ttaagtgttt ccttttaaca 4800 tatctcgggc ttttaccccc aaacgtattg gaaattatta atgtccgatt tgtcacaaat 4860 4865 atata

<210> 3040 <211> 2846 <212> DNA

<213> Aspergillus nidulans

<400> 3040

catcattccg catagtctga acactcgcgg tgagacaacc aggtcgccag ggcatcctcc 60 tctgtactcg cgtgtcaata cactaataaa gccctgcgat gacctcgaca aaatgcctaa aaccatgact gcatcgccta gcgacaaccc cttccccaag aatggcacac aactctccgg 180 tgtaaccatc aggttgttcc ttctcgttga ctctcccagt gacggattgt ctcttagaac 240 gatggtagcc cactaaacga tgagtggacg aagtcagcgt ttggctcctt actatctgtc 300 egeaagetgt eteaceetta tigegtigte igtgetgatg tietteigti giaateigta. 360 agtgaatgga atctttttca caatgacatg gaatgcttcc gagcagcttc cctagagcag agaaagtcaa gcccgtcaaa agacctcggg atatcaacat tttaactgac cgcgttgtag 480 540 acatagetea geegeetgte aaggtacagt ggtetegeaa egatatagga egaceaagtg acagatatet caccactgag accetgtege caggeetegg geaactetee cagaatgttg 600 caacttcgca gtaacatgtt gctggttgac aggccttgtg atcgtcaatt ctgcgcaatc 660 gagtetetee gagggateta egggataegt atggeggttt ttacagetge aatteagaaa 720 780 totocatago gogtogatti cacogigiot cotacogitt giotogacio cattolgaat gtgcaaacgg aaccccgcgg cagattgaac taatcagacc taggaaggca tggcagtggg 840 cctgctcgcc tggcctggca ctaatagaag actggttaca accaagatca gaccctcttt cttcgtcaac gacgatattg acttcgagac accaagaget cagaatetgt caaataccag 960 gagetteete eegtgegeeg acaggaaace etetattgee tgtegagtgt eeaaactett 1020 gatgageatt getatttgte etecegttee eteteteaca teegegetaa gtggtetege 1080 agcatagcaa atctcgcccc agcaagctca aaaccaagac cgtttcgacc ctagatctgg 1140 cagaaacttc tatcctggga atctgatctc tcaaacgcat catagctctc cagcctcagt 1200 atatgggccc tcagggtctc atcgccgccg gttcaccatc acagtaaaat aggccatgac 1260 gaaacttgag cgcatttgta tatcttcgat ggataaaaaa tactgcctgg tctcaggaga 1320 cctagcaggg ctctgagtgc ctcctgatgg ccttggcagc atgcacgagc aacgacacga 1380 taatcagttt gaaagacgct aatccaggcc caagttgatg gggtcggttc gttgccaaag 1440 accttatacg gcattccctc gtttgtttgc gcttagatga ccaaagtatt catgtacctt 1500

cttgaagggt gctgaccatc tgttgggcaa cgtatcggtc tgggtcttcc agtcatcgtt 1560 cgcaggagat gcgctgtggt gctctgtccc agctcctatc cagaacccgc gtcttggaaa 1620 atcqqtqtqc atatttqtqc qtcaaggtta acacttccca agtccaatct ctqttqataq 1680 tactccttga ggccgtcctt tgtcatgtga gcccggattg accgcttcta gcgcaggcct 1740 gtaggaaggt tgacgtcgac tgcgtggatg agacgaatgt cgagaaggag tatcttcaat 1800 aaacccaact tcttctcgta aaggcccacg ccgagtagga caggattact ttacttcatc 1860 gccatgagaa ctaagctcaa cacaacgtcg tttcggttca atcatcaccc ttctatatca 1920 ataggcaagg ctcctgcagt gcttttcaag catctcaatg caaagacctc gcgagagcga 1980 teceetgeee tggeecagag aacaccatgg ceetteaaaa tgtagataag eeagteaaag 2040 ctgggaatct ggctataagt ctgacaatgt agagattgag tagatgtttc ctgccaggaa 2100 ggctgtcgac aagactcgcg atggaggggc agaggtgcga agaatgctat agtaaatact 2160 aagtaaatgc aacatctcgt gtcagagatt ggtggccctt aaggaatagg ccgtcgagaa 2220 aatgttgtca atattgtata gaaggttttc acagactaca aagtgttagc agatgatgct 2280 ccactgaaca atatatatat cctagcaatc caccaaccaa tcaggtgacc aatcttaggc 2340 ggacttgttc ttacttattg agagctaatg caggggtacc agtacgtgtt tactgggact 2400 tggaacaagg accetgttge tggetgeeag ggteettaet atagtaaagg catatatgta 2460 gtcgggattt gcctctacat gcaattaagc actacgacac aaactcatct aaacggaaaa 2520 gtggacgtca gaagaaaatc atacccaagt tcatgcgagt ctataatgtc ggtaatgtca 2580 gtaaccaccc caagaacaac tgtcctcatc tgcagccgca aagcgcgggt gctggccgcg 2640 gtatagaaac caaacgaatc aaccggtcga tggaatgccg aaggaaaaaa ggttaaaggg 2760 tgcaaagacg aaagaggaaa gaaagagaat aaccagtcat cagccgaatc ttcggtgcaa 2820 acgccatcgc aaagcagggc gtcgac 2846

<sup>&</sup>lt;210> 3041 1446 <211> .

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

<sup>&</sup>lt;400> 3041

agttctgctt ccttcaccat gccgattgcg acacactctc cgtggagaat ttgcggcgtc 60 agaatggctt caatgcatgg ccaatagagt gaccccagtt caaaaggttc cggagacccc 120 cctcacqttc gtctgctgag acaacatacg ccttgtgccg cgcagatgcc agaattcggg 180 ccttcagaat ctcttctatg ccctcaaacc gatgttctcc tggcctgacc tcgcgacgga 240 ccgccttcaa gattgtctcc gcgttctctt ctaaagctgt aaactcttct tcgctagaga 300 ttgctgccgt cttgatgacc tctgccatac cattgatgaa ctctctcacc ggcagcgtct 360 ccaagaactc aaggtcaatg tagattttcg tcggttgcca gattgcgccg atcaggttct 420 tacccagcgg agtgtcgatg gcagttttcc cgccgatcga tgaatctacc atggccagaa 480 gagtagtggg aacctgcaca taacggacac cgcgcatgta ggtggaagcg acgaatcctg tragatric gatgariet craccaatg caattaraar ggtategegg cracatggag 600 ggttctgact caacatccaa tcctcaatat cggccttcgt ctgtcgggac ttggaaactt 660 ctccgggggg agcattataa ataaggaggc gtggggaggg agtaatctcg acgacagctt 720 ttcgaaaagc ttcttcaaag ctgggggtgt agatcgatcc gatattcgta tcagtgacaa 780 840 ggacgtaggt ggtaaagagc cagtcactga tcaggtctta agccacatag tttcgccaaa gcccgtaatc agcgatgatg ctttcccggc caaggatgct gatttttgta gggttcgaca 900 tggtagagaa cagcgaagat aatagagtga aatgtcggtg tctctagttc atgcttgaga tatgettgeg aeggagetee egagegatet etcaattete caactgegaa gactegttaa 1020 tggcagagaa ctataaccta atatacgagc gaaaggttag atgcttttgt tcgcaaccga 1080 ctttgaaget cagagatgge ctagetacga getgageteg aggegeatte agagegeaat 1140 gagtggtgcg gtaccggaga ttttatggga gggggcgagg atgagtaaaa ggttggaact 1200 gacctttcag aaggaagatc gaaagcagaa aggagcacac ctagcaagct caagatgaat 1260 tgagattgaa ggagtggtgg actgggtgtt ggaggtgtgg gctgacgaaa agtgtacgac 1320 ttgactcaat tgactcattg aaaaataatc ccttggggat ttttctcccc gcagctccga 1380 tgtcgtcgct cggcacactt cttgttcgtg catctaccta cctactataa ctccgcacaa 1440 1446 agtaca

<210> 3042 <211> 2150 <212> DNA

<213> Aspergillus nidulans

<400> 3042

gagtgcgcac ccattcataa aatcagcgtc gtcatccaaa attttgccgg ataactcgtc 60 agagcaagcc acgtttaaat cactatgcac cttcctatat tctaagcgcc aattcttgag ctgatcagta tcttctgcat ccaaaatttc ttgaagctta acgtgaagct ttcgtataag cgaacggaac tcaacatagt cgtccccatc aaggagagta ccgtcagaac ggagaatttt ctcgactggt tgttcttcca cagacgtgat tagatccact aatacgtaat aatattagta 300 tttaattaag atctacccat gggtagaact ttaccattgg acaaagattt tttcagcaga 360 cgtaaagttt tcgctggtaa aggccgttca agtcgattct tgacaatact tgtctggaga gettteacea tagecetgge eteatettee aggttgaeat aettgggggg tegegeegtt 480 agaaagcctt tctttgcagg acgatcttgc agaggttcag ttctattaga acgattgata 540 gtaaaagatt gcaaatcctc gttccaatta tcgatatcag tttcataacc gaacttagcc 600 agaagcatgg caagtteetg gagaaceteg acegeagtet catacteage etgatacegt 660 tctgggttag aagctaccca tgggtaaata attcagctat ggtgaaaacg tactggtgaa 720 gcaatcaaaa ccaatgtcta gctggaattt tcctgggcag gttttttcaa ccccattcgc 780 aagtcagaat catttgctgt ttcagatgce gataatggae tatagegeca agaatatete cctgtaaagc aatatcactg cggataacca ttgaattgag gcatggggtt ttctgcaaca ttttattctg ggagaaattc attttacaga aaatatcccc ccagggagtg tatggctcat aagcggcagt ctataggtgt gttagattag gatctaccca caggtagatt atttgaacta 1020 gtgaatactt accaagcggt taatatcatt gaactcgctc ataatgcctt gaagacaatc 1080 tggccgtgcg tcaataacca attttacaac ctggatccag tgcacatatt ggaaacgacg 1140 aaggtattgc tggcgggatt cctcggcatt ccgcatcttt tgaccttttt taggggtatt 1200 ctcttcatct atctcaagat tatcccctag ggtggattcg gggacattca gctattttat 1260 tcattattag tatatactat attcagtatt gtagggagtt aaaggatctt aacatacaaa 1320 agtetgaaga ttgggatett gecacaagtt tteattgegg actagtteee acagattetg 1380 gagaaattee catgeettat geteaggtgt ttetgaggaa ggageegagt catetteate 1440 caggaacaga aactgttcaa tctgatgtag ccagctaaat gacatccatt catggcttga 1500

ttttgatggg agtctccagg tcggctcgat ccacatcatt acatgatgta atacettgga 1560
tacaactgac gagacatttt tctccagatc aacccaattg ttcctacaat cttgtgagac 1620
atttccaacc atgggtagaa taaatatgag atcttaccag gtggggcagt agagattttg 1680
atgggcatgg agatgtctga aaacatcttt ataggacgca tcagagagat tgacaaggaa 1740
cccaggccgt ctgttagcaa actcctgatt ctggataaca atgggggatt ccagtttggg 1800
aagttccagc ttgctggagt agtcacttga gattggaaat ggttgcttcc gtctttgcac 1860
agaaccattg gtaaactctg tccaataatc ctcgcgtttg gggaaaaaaa gaagcctcag 1920
ctgggagagt ggacggcct ggtccagagc aaggatcatc ttccaatcat tatatacaat 1980
gagattctga tgtttagccc caaaaatagt agagcaaaac ttaaggaact tctggaactc 2040
ctgtttccac acctacccta tagttagatt tccattagaa tgaaatatgg ggacttactt 2100
acctctgtct gcttgcctgc tgcatcgagc catcaggaca gttcgttgac 2150

<210> 3043 <211> 1169 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3043

ccagtattat aacaatctca ggcgctggat cttctacagc gcggcaatag tgggaatcgg 60 ccgttgttta ccgggaagca caatgttgtc cccgggtatg tggttgctgg taatgggacg 120 atgttctgcg aggttccgtt tatattctac aaagtaggca gaatgatgag aaagaggagc 180 aagtttgcaa agtatagcgt tgaggtaaaa agatcaacga gggttgaggg gactgcggga 240 tgcagctggg cgtttagggc tggctgacaa aaggtagctc tagccttatt catgtttttg 300 atcttatctc gtgtccattc atgcccacct tcgatactgc gtaggcaaaa atagttcatg 360 attattcctt agctgtctat ctagaccgtc ttgcgtgctt gctttatgca ttcgaaccgt 420 ctgcaaccgt aaagccttgc tacgctgatc gcacccctcg agcaaccagt atgtgactga 480 tccctaagaa ggcctgatct agcattcagt gatgccggan tatagctgat cactcacccc 540 caacgacccc ccaccacgca atccccaacg cagcgcctgc aacgatcgcc acggaggcg 600 gcaccctaaa ccaccgagtt ccactatagg agacagcagc aacaacaacc caccatggct 660

ccctcccaa actgacact tcctcactcg atcggccctg ccgcagatac ccaatctccc 720
atagtcgata cacagccgta aacaccagcc ctaccgcggc ggcattgaca cctcgcagaa 780
aatgaacgac gtacatcttc cgtcgcagag cccgccagaa actctgtacc gcaacggcaa 840
gaattaagcc cgggctaaag atggcaaaac cggatagcat cgcgccgagg acgctgtgat 900
gtgaggcgga gagagtgagt gcgcccagaa agactgcaaa attgaagtta ggaccggga 960
aggactgaat gatggctaag ccgatcagga agtcacggct tgagacccag tttgggtcga 1020
cgacgtaact gcgcaagagg gggatgacta cagggccgcc gccgaagata accgtgccgg 1080
cgaggtacat gttgctgaac agggagaggg gtaatgggg cgaggagagg cgggcgcta 1140
ttgtagaatg taataacagg ctatacgaa

<210> 3044 <211> 2120 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3044

60 ccgcgaactg cagaagcagc aagccccaga actgacctaa gatcttgtga tactggaagc cagggtctcc aaacttggcc atccagtcaa agttctcgtg gcaactgtga tagggatatg 120 gttccccggt gaacccaaag tctatactgg aaatacctgc aaggtcttga aaagccacat 180 agtcacttcc ggctcctaga ggtgcaaacc tcttgttctt ttgctcccaa atgtctttta 240 gggtctcgtt cgtaacggga tctgaaattc ggcctaggac ttgcatgaca acgcgctcgt 300 agagaggaca gccggaagct tcaaagtccg tgccgctgac accgacgtcc acgttgatat 360 acgcgtacgc attcccgtgc aaattgtcca tgctgtcctc gacatgctcc gtagaaccga tcaggttata ctcttctgca tcccagctag caaactcaat ttttcgcagt ggccgccagc 480 540 cgaacgtcag gagttcaccg aagacgcgca caagttccag gaaaacagca gttccactgc 600 ccgggtctgc actccctaag caccacgagt cacgatgatt gcccacaatg atctttttt ccggttcttc cattccgtga atccttccaa taacgttgta aataggctgt cgatccactt 660 catcctgaag gttcatgaga ttcacagtag gcgacttctc gtcgcctgtc caccattgct 720 tgaccttggg aacaccgcca acccatttct tcggcacctt tgacccgtgc ccttcaagca 780 cctgcagaag cctctgcgcg tcacgccatg ccagaggaag actcggaatg cctggcatgc 840

ctgttgtttg ctccagactc aacctcgttt tcatttgtgg cgtcgacgca aaccctggag 900 acagtacgtc cccaaccaca tacgacatct gactcacggc gcccctttga acgccatccg 960 egggeatgaa geggeeettt gggtaggeeg eacetetaae aaacceatea teagaegggt 1020 cggaatagat aatacacccg gccgcaccag cgagttcggc ggctttgacc ttcagagcac 1080 gatctgattc ggtcccataa taccggacga gagcgatgga gccattcaaa ttgatccctt 1140 tgtccgccaa atactggaaa tcttcccggg atccatagtt tgcgtagacg agatgaccgg 1200 tgacattccc tgattttgaa tgtccatgaa agaccggtgt ctcgctgtca ttctcctcaa 1260 gaatageete eeacetgaga tegggtgggt caataatage tateegeege eegtetteet 1320 tggggtaatt tagatacacc tcatacttct ccatttcgat cgtctccaag cctgcttcct 1380 cgaattcccg ctgtatccat tctgcaagca cgtagcttcc ttcggtaccg gccatgtgcg 1440 gaaactcagt caccetecte aagtatteag egatattegt etegttgata tggeeetgga 1500 cgaaattctc cactgacgcc gcgctatatg actggcccat cataaatcgt gaactaaaat 1560 taaacacatc cgagacaacg aacacataga tgacagcgat gacgagtaat aaaccgaaca 1620 ggcgaagcag gataatgcat ccgttagagt tgaaactcgt ccgagctgaa ttcaggttga 1680 ttgtgaattt gaaattaggt aggaaccggc gaagcgggag atgtatcgac gataacgtcc 1740 tgccgagatt actgaacggn tttgaagtcg agaccgtaat cgcgaaccgt gagagctctt 1800 gtgacttgca ttcttaacat ncatctgatt aageteeeeg eggeaattet teagegagee 1860 cctttcgaag cggcaggcga gagctaagtc atcacgctat ttcgccgact cacccgaggg 1920 ttgtagcata agcccgatta ggcttncggc aangataccg ttttgaagaa ggccgcgttt 1980 gggccgtttg aaaaagggga aagttggcag ctttggcgga tcttttttaa ggtggggaaa 2040 tttttttttt tttttccaat ttgtttgccc cccttttggg aatttttccc cccttttttg 2100 2120 gggaaatttt tttttcaaa

<210> 3045 <211> 7041 <212> DNA <213> Aspergillus nidulans

<400> 3045

attggatagg ttttcacgta aggagggagg gacttgtgga aggaggagtc gaagaactgt 60

atgctctgga cgttcgggag ctcctttttg catagtcgga cgatttcgag cgcggcgaag ttgtgcctgc atttgtggac aagaacaagt cagactttct gtattttcta tctcgacacc 240 agtaggaaac aagtgaatgc acatacaaag gcgccaaatc ctccaggtcc tccagctggt 300 ggtatgtttc ctcgttgatc accacaggac tctcaaagtc gccgccgtgt acgacccgat 360 ggcagatata agccaggtcg tcggcactag caacatcttt gaggtcagag tccgtgaagc 420 ageggtgeag caggagtttg aaagegtetg geeetgaget gatettetee tteagetett ctttcttctg cttcgagccg acgctgtact tgaatgttgc ggggggtgcg gtgatgccgg 480 540 agacttgtgc ggtcgcgata acactggggg ttttggtgta gctgtagaaa gtgattttga 600 cggaggagga gcccgcgttt acggagagaa tagatttgcg gggcatgttg aaaggttgct gattttgttg tgatggtctg gtagaatagg tagtgtatag tttgtagtcg tctggatgga 660 720 tagcaggtct aaagtgaaat cgacttcgat tagagaatac acgtctgaga cggagctgat 780 tatttgatca ttttcagtgc ctatatcttt tccatcttgt tttttgacgt tgttctatct ccgcgctgtc tcacaatgct tgttgtcggc cgctttgtga tgtcaacctg aacacggtga cgtagtgcag ccgtctctgc cgagtctggc cagtctaccc aacctggctt taggtatatc 900 ttagagcagc agtacaaaaa caaagatatc tcgagcttcc ttaatcttaa actgattgaa aacaatatat caataccctc tacatagcca ccacaatgcc aggagaagtc atcgagcgac 1020 caaacccggc gccaaagccg tcgcatgtcc ccgatttagt agaaaaactc ataattcccg 1080 cgcagaagac gaagctggag aaaagcgatt gtgatgcgtt gcacaagtat cgtcgcgcgg 1140 cggcgtatat tgctgctggt atgtttggct ttggatggat tagtcggtgc atgggcgctg 1200 acgcetetat acagegatga tetteetaca ggataatgta atgctgaaac ggtetetgae 1260 gaaggaagat atcaagccga gacttcttgg taattagccc tatcgaggct catggctggg 1320 aatgtgtgta ctgaccgatg tcgtaggaca ctggggaaca tgtcctgggt tgatcctcgt 1380 ttactctcac ctgaactacc tgatcaagaa gcagaacctc gatatgctgt atgttgttgg 1440 gccagggcat ggagcaccgg gcttgctagc atcgttgtgg cttgagggct cgctggggaa 1500 gttttatccg cagtatacca aggacaagga gggtctgcac aacctcatct cgacgttcag 1560 taccagtgcc ggactgccta ggtgagattc tattgatcta gacagaagcc aaggaagcta 1620 acgtgttgaa gccacatcaa tgctgaaaca cccggcgcta tccacgaagg aggagagctg 1680

ggctatgcgc tgtctgtctc cttcggcgca gtcatggata accccgattt gattgtaaca 1740 tgtgtagttg gagacggaga ggcggaaact ggtccaacag ccacgtaagt ttgtgattcc 1800 gtgtgctgaa tgtatcctgc taacggttgg gtcagatcat ggcatgcgat caagtacatc 1860 gatccagctg agtcaggagc cgtgcttcca atcctgcatg tgaatggctt caagatcagt 1920 gagcgcacta tttttgggtg catggataac agggagatag tctgcctgtt cacagggtac 1980 gggtatcagg tgcgcattgt cgaggacctc gaggacatcg acaacgacct tcacagcgct 2040 atgtcctggg cggttgagga aatccgtaat attcagaaag cagcgcgctc cggaaagcct 2100 atcatgaagc ctcaatggcc catgattgtc ttgcgaacgc ccaaggtatg cacccatccc 2160 cttggcttga ggttaatcag ctgacgtgtg ttagggttgg tcagggccga aagagctgca 2220 tggccagttc atcgaaggat cgttccactc ccaccaggtt cccctcccta atgctaagaa 2280 agacgatgag gagctccagg ctctgcagaa atggctttcc tcttacaaac ccgatgagct 2340 gtttaccgag tctggcgacg ttatcgacga aatcctatcc attattcctt cggatgataa 2400 gaaactcggc atgagacccg aggcctacaa gactcatcta ccgccggacc tccctgactg 2460 gagacagttc tgcgtgaaaa aaggggatca gttcagcgca atgaaggcca ttggtagctt 2520 categaceag gttttegtea agaaceegea tacegteegg ttatteteae eegaegaget 2580 ggaaacaaca agttgagcgc tgccctatca catacgggaa ggaatttcca gtgggatgag 2640 ttctcgaatg caaaaggtgg gcgggtgatc gaggtcctga gtgagcattt gtgtcagggc 2700 ttcatgcagg ggtatacatt gaccggccgg acgggcatct tcccatcata tgagagtttc 2760 ttgggtatta tacataccat gatggtccag tatgccaagt tcgcaaagat ggtacgtaaa 2820 gtcgagtaca gtcagcgctt cgtgctaacc agcaaacagg ctaaagaaac ggcatggcac 2880 catgacgtga gtagtatcaa ctacatcgag accagcacct gggcccgaca ggagcacaat 2940 ggcttctctc accaaaatcc atcettcate ggcgcggttc tcaaactgaa gccgtacgcc 3000 geoegegtet acetgeetee egaegeeaae acatttetta ceaettigea ecaetgeetg 3060 aaatcaaaga attatatcaa ceteatggte ggeteaaage aacceaecee agtetaeetg 3120 agccccgagg aagcggaaag ccactgccga gccggagcct cgatcttcaa gttctgcagt 3180 accgacggtg ggctccgccc ggatgtcgta ctcgttggaa tcggtgttga ggtcatgttc 3240 gaagttatca aggcggcagc catactgcga gaacgatgcc ctgagctgcg tgttcgtgta 3300

gtcaacgtga cggatgtatt cattctagag aacgagggtg cccaccccca cgccttgaag 3360 cacgaggeet tegacaacet etteacegag gategeteea teeattteaa etateatgga 3420 tatgtgaacg aactccaggg cctgctcttt ggccgcccta ggctcgaccg ggcaaccatc 3480 aagggatata aggaagaggg aagcaccaca actccatttg acatgatgct tgtgaatgaa 3540 gtatcgcggt accacgtcgc gaaggcagcc gtcacgggag gagcgaggtt caatgagaaa 3600 gtcaagctgc ggcaccagga gctttgctct gaattcgatc ataacattgc tgagacgcgc 3660 aagtacatca tgaacaatca tcaaggtgag tgagctgctt ctgatggata ttatttggat 3720 tcatcctgac atcttagcag atcccgaaga cacatacaat atgccctcat ttaactagca 3780 gatggaaact ggagctaggc atatcagcgt accgaatcag aacacatttc acggttaata 3840 gtccagatcg tcttgcttgg tagtgttgta agaatgtagg aagctaaaac agttgatggg 3900 gtgagtctga atcgtaggag gacaaatgac aggggcacgg gctgtaacac ggctcggttg 3960 ategtettee teteetette eeegtaetet ggagteaate titetgaaca atgeatetta 4020 tettatattg ettteattee tattgttget gggetgettt ggggggteaa tttteteaga 4140 ctctaagacc aactgcctcg actctctccc gcccatcgtg tcagagattt gtttcgcaag 4200 ggtgcgatcc ttcgcgtcga atttttgagt cctcgtcagt tctcacagac accctcggta 4260 tttgtgaccg gtcatctggc tacggaatgg tgggcttaag gtgacgagaa gtctatcgca 4320 aggaggttcg tcgggccgtt gcagtcgaca agatcctcac ttggctggcc tgatgataag 4380 atgatatcga tggcgttgca agatcgatct ttccagtcca tcaataaatc catacgccaa 4440 taagaacaaa gcgatgcagt tcgactctag cctttcccgg cagacaagaa agttgccgat 4500 ctactcggac caatttccat caacagctaa accattttca acaaaccttg cgaccatctg 4560 tcaacctctg tggacttttc ctaggctgaa gcccacccaa gccttcaact gccgaataac 4620 acacggcccg accgaggcca gggacaggag tcgaacaaat cagactccta cgtgtgggac 4680 tgctccgcca gcaaccgaag gctgccatca tggaaaaacg acggacatcc aaatctatcc 4740 gttcccgact ccgggagccc gtttggcaga tttttttggcg atgcgcaagt agttttcgcg 4800 atcttccttt cgcgtcatgt tgactgtttc agactctgtc agagactcga cctcatggcc 4860 

aagacgctgc tgccgctcgt ttactaataa tttggctcca aaaccaacag cctatccttt 4980 cattegetat atetacatee gtgetetata gtetgtaeta tteaeteagt tteaaateeg 5040 acgagegeee ttacgeaata ttgategget etecetggat ettteagteg ttacecegte 5100 ttgaagtete ttetteete catetacaag ttgttggtta aagatgteeg acageaaett 5160 ggacataagc aattacatac tgcctaacgg caccgtccct tatgaggtca ggagacagct 5220 gcagaccggt tgccatgcct acatcgatgg gataggcact ccttacggtt atgtcccctc 5280 tetegeagea ggeategtet tietigteet etteggeett acaatggigg gecagaeagt 5340 tcagtttgcc tggaaacgga cctggtggtg cgctgtattc gctgtgggaa gtctcagtaa 5400 gtacttettt accetteget attttatace gtetteteat accataceae cacageegaa 5460 gtcataggat gggccgggcg aacctggtcc gcagaatgcc catacaacac caatgctttt 5520 ctcatgcaaa tcacaaccct gatcatcggt aagccctcca ctatatactt tacagatctt 5580 cgaacttggg agaagctaac aaatccgaag cgcccacctt ttacacggca ggcgtctatg 5640 teeteettgg eegetteate gaacteettg geegegacte tteaateete ageeegegag 5700 tgtatctcat catcttcgta acttgcgaca tcatttcgct tgtagtccaa gccattggcg 5760 gcggaatggc gtctgtcgcc gctgcgcaag aaaacggcaa cacaactccg ggcacaaata 5820 tcatggtcgc cggtatcatc tttcaaatgg catcgattac tgtcttcgtc ctctgcgcgg 5880 cagattttgt ccgtcggacc ctcgtccgcg gctcttgcag aactatacca agacaatcgt 5940 gccgctgctt gcggcgatgg ttttctcgta ctctgtatct atgtccggag catttatcgg 6000 accattgagt tgttggaagg ctggagcggg tatcttatta ccacagagag attcttcatt 6060 gcgcttgatg ggtcaatgat ggttcgtact gtcgccatat tcaacctgat ccatcccggg 6120 tggtttttgc ctgagtctgg acatggagga aaagggtgtg aagatgggag cttcacggag 6180 ctgaggtacc tgggttaatt tgacttgact cttaccttgt tcgctttata atatcatcgt 6240 atatatttct ttacttaccc gagcaccttt atcgtgcacc tttggatgcg ctggatacct 6300 tggatctaaa ctagagcagg tttccatata gatggctagc tcgtgcaatg cggaagtttt 6360 acaggatacc gcttgaaaaa tagaaacaga cttggaatta acagagctaa aagataaaaa 6420 caagatatta aaacccagcc ttgcgtattc gtaaagtgag aaggcaatac aagcccgaaa 6480 gccgcaaaga caagattagg acagtggaac aaaatgaggt gagcccaagt ccaaactgag 6540

tececetage tgatacagta taateceate egacttegee aggetaageg aaacaaaate 6600 ataaatteaa tteggaataa gaageeaagg atetggagag tttgactaaa gtecateaae 6660 ageeteaate caaceataga ecaaceeae gaceaaggta geegttgtee atacgaatee 6720 tecacacega agegeettgg aagetageae egettactgt eeetgeaace tgaatgatag 6780 tgttggeeat gagaacagtg getagagtea eegttegett gataageaee etggteetee 6840 atgaaagege geeceaagte tteegataga eggtggagge aaggtactet eeetgetgag 6900 gaaggaeget tttteettt teaatetegg tateetgtae ggeeggggtg eeegeagge 6960 taacaaaaag gaagteeete getgeecaae eegetgggag aagagaggg aaaagagteg 7020 gaaageegaa eagggeegte e

<210>	3046
<211>	2284
<212>	DNA
<213>	Aspergillus nidulans

<223> unsure at all n locations <400> 3046

tgaggtcagt aactatatct actgacaggc tagttactga cgtcttttat acttcacata ggaagaggac tttagcaccc aactctataa ccggacatta ctatcgcatt ttgcatacga gcatttcccc agtcttttga accgtgcgat ttcctggatc gatgagcagg aatccattga cgctgctgcg aaaagtgcaa taaaatctcg tttattattt cggcaagagt tccttctggg 240 cctgcagcag gatatcaata ttttggagac caggtccgtg gacaagctgg cgtcttgttt 300 360 gtctattata cctgctctga aaaaatcagc ccaaacaagt cgaccggtgc ctgaatcctt tagctggaag atacagagaa gattggctag caccgtcccc cctaggccag tggtgaaaat 420 cagctttgag gatgcgctgg cgcatctcga acggctgtgc caggacggaa ttcacctcaa 480 tcaaattctt gactacagag ggccatacaa tctgaaagta agttttcctt tgcgtctgca 540 tgctgctgtt tctaaaagtt taggtggcca tttggaccct tctctcccgt aaacctcagc 600 catcagtgta cattcgatcc cttgttcagt ccattattat ggaccagtct accgtcctcg 660 ggtctgtccc agttaagcag tttctctacg acgaactggc ggcgcttgtt ctcccttcca 720 gtatactgct cgaggcaagc cttgacgaaa ccgaagttcc ttcagacccc cgctttcaga

tcgctcaatt gatggacggc ttcgttagac gattttctca ggtacgcacg atcactcatg ttgacttatc agtactaatt taagggccag ccatttgtgg atacattccg aagtgcatgt ttgaatcgct gccgtatccg ccgcaccgtc tgtcatactc tcgccgattg ggacaatctg 960 caaatggagg teegtettet agtaetggaa accatgaeet caattgaetg taataggeee 1020. aagatettgg egageagett eggaeteaan geggagggee geaattatea etteeaaatg 1080 gagacactac gtactcgtac cctcttagca gctgggccta ccaccagaag ctgatccaat 1140 tecgattaat tetecaaete gggttegage tgtecatata eggteeagaa gageteeeeg 1200 gaatgtactg gtatttatcg cacatctgct cgacccatct cggtcatatt gatcgaatcc 1260 gaacattcat cctcgcggcc gtccagcgga accgacgctc gcccacccaa cacgccaccc 1320 tecgateate attecteete ttegacegae taaegaegea gategtegee ategaegeet 1380 tegeaatage tetgeaegee etetatgtee ttetateteg ceatagaatt etaceeaetg 1440 cctcggcgcc taacgcctac tcaaacgacc aattccgtta cgagcttcgt atgaagccct 1500 ttetteaaat caegeteece gaactegtge eetatgaaga atacegtege gaagetacat 1560 tgcagggtga cagcgacgag attgtcatgg agcgcgctac caaggccatc ggcgaacgtc 1620 gaaaggcctg ggaagcgacg ctcgccaatg gcccattcga caatttcaat gacgagaaac 1680 cggatgcgcc tgctctcgaa gaggactgga aacgcgacgt gaaggataca atgcgagcgt 1740 gcattggcgc tagcattgct atcgagactg taaagaaagc gattgccaat aacgccactg 1800 gcgacgcaga gtcactcggt cttcgagtta acattcccga tgctggctcc aagaatcgtt 1860 ggcatgactg gtgggccgtt ccgcaagttt cacaggtaca gacacaatct cccagtacaa 1920 cttcaaagtc atgaatcatg agagatacct ttcttacaag tactaaacat acaactgatt 1980 ccggcggaga tgattcccgg cctatttttg agcagtgagc tgagcagtct caaaatgatt 2040 gatagaaggt ggggatagga cgtttcggca ggattatcta ttagataatg aagaccaata 2100 ttatatgcat tagatacgag gttatagaac ctgaatggat gaatattttt ggccacaggc 2160 gataattagg caggtatagt tccctcaaga cagcttaata ggccccccgg ggttggcctc 2220 gaggcagtgt agagcagggc gagccgcatt cacactcaac actcaagcaa gtgacattca 2280 2284 CCCC

<210> 3047

<211> 2236 <212> DNA <213> Aspergillus nidulans

<400> 3047

aaacttctcg attaattaaa ctcatataaa ttgcggagga tggggatgat aatctttatg caagaaagtg acagtaatac aacggtgctg accaaagaat tgtgccgccc agcctgggta 120 ttgtttggta attcagtaat aatgcacacg ttcccgcgcc ttcgaagagt gcatgtcagc ctgcgcctgc gcttcagaaa tgctcactgt cctctactaa ttgctctcct caatctttca 240 ctttcccctc cagctctccc aactgcatga gggttattcc tcttgatacc cctgccttaa 300 tatatctttc atttagcata ttcatggctc atggtgtttg atttatctca ttcgttcctc 360 actiticteat teetgeegee titteeeetgt gittgtgteta eegaaegtet eeggetegte 420 tegaceteta teegatettg acattegttg geegegeete tgeggattae aatttataet 480 ctcctccctt accgttcgtc gcgccatact gataacgagt acgccggcat actggctgtg 540 ttgccgggtc ggctcgtcgg agcggaggct ccttaatatc ttgcatctct tgatttcgcg 600 actatacgtt tactacgaac gtgtattata ccacagatgg cttcagactt gccgcctgta gatttcccgg ctccttgtcg ataagaagat cgttgtagcg gcgggcctcc ccatagttgc 720 ctagtttgta gttacccagc gccaggtaga agagacattc gcggcgtcgc tcgggatggg 780 cgcggaaaat ctcagacagg agacgaacgc cctcttgctg gtcagctcgg aaattcgatt tgatcaggcc ctgtacagca tgttatgtca gtagagtcca gacatcttcg tttcttgtgt 900 ggggaatgaa ggtgcttacc caggcatagt tgaacttagt ctgaacacca acgtagtcgc 960 cttctttttc atactgggcg cgaaggactt gaagctctgc tggcttcaac gggctgtata 1020 ggctttgtta gctgctgccg cgcaataact aataatgtgg agaatagacc tttcagcatc 1080 tgcggcatct ggatttggtc agtaccaaat agctcgccct tgccagtttg gaccacgtac 1140 aagggagatt tgaagaagtc atattgctgg aatacagtac cactgtctga gtcttttggt 1200 aagatatgca aaagagttgt gatgtcaaga atcggccagg ccaggcagct tcactgctcc 1260 aggtgacgag gcggtgcacg tggagatgtg gcgttgccct cccaaccgtt cccgtattta 1320 ccacggatct gtattaagac agcccctcac tatcgcatct ttttaaacac agcggcctca 1380 tttcgaccct atcatagtca ccatgttgct cgacgagaat ccgtctacgg taagcgtact 1440

<210> 3048 <211> 2328 <212> DNA

<213> Aspergillus nidulans

<400> 3048

aaaaaaaaaa tgcgggaatt tggaaagaaa attttttga atccaaaatt ctcccccaa 60
attttatatt aaccaccttt taaacaacca agcccatggt gttaagtttc ccaccaccga 120
atccaaaaag gttactttca aaaaaaaat caaagccatt tgcccaaaag ggtggtttct 180
accaacggct tcccccttaa atttcttgta aaacccccac caaggggttc cctcctgcct 240
caaaaacact ctgaccagtc aacaggttgt tagaataaac cacaagtaaa gttccatccc 300
tcaacgaagg tgaataacac gttcaatccg gccaccgtga gtcaacgcta acaactgcac 360
cgggtcctcg gaaaccgcct cgcgacttcg acgttgcaca gcagagtact ggacagtcat 420
caacagcctc tcctacgcta aatgttccgg atatggctt ctctccggct tcgggctcgg 480
ccatggccca acctcagacc aatatatccc ccgttcggaa tagtcatgcg ccatcgttga 540

gttcgtccat ccaggtttca accaacacgt cgaacgtagt agattgttcc acgcctgtcg actctatgaa tctggacccc caccctaccc aggctctaac accaggtcac aatgggacag agccaggtgc ggctcaagta gacttgaaca aacttttttc cgacggattc ggtatcacat 720 ttgagaaact agcagctatt ggtgggtccg acaaaaaagc tcaacgggca aaggtgttct 780 acatatggta ccctgaggac tcaaaagtcg ttaaagacga aaaggactta ataacgagat ttttgaggat ccacacccgt cttttattct caaatagcgt caatgttgac tgggaaagat ttacgaccat ggttaacgag aacaatatgc atggtgttgt tcttgtatgt cctccttgct 960 tgacttcata ctgccctaac actaccgcag tttcatgagt ccttcgtcga atatgacaag 1020 gttcctcaac tccaaaaggc ccttcgcagg acgaccggtt tctggaaggt gtccctttca 1080 aagccgatcc aatacgttga tcgtccacta catgtccagc ggctatttcc acatgggggg 1140 atttttctgt tgaccgagga cctgattgtc cacgaaccgg ttgctgctat gataattctg 1200 caatggttct acgagtggtc aaaaaagaag catccaggac tatggaaaat aatgctccgc 1260 cccaatatct tgaactggct gacaaatcag atgaaactcg cagattattc acaagaatcc 1320 cgggtgtgta cctacctatt cacggtttca gtggtcaatg gaaggctcag cgcttaacca 1380 aggaacatca ggtggctagg cagtacacca tctggtctaa caactaggtt tctgctctac 1440 cagcaatcct ctatctagct acgaaagctg ggaaggcgtc gtaatctctc ctcctgcact 1500 ccccaaatac gggtttcgga cggcagatga ctcactagag attcccaaga actgctccca 1560 ggagcagcgg aacgcggacc atctaagcga gttttttgcc ggttacagct tagttcacgc 1620 tcatcgcttc cgccgctttt atattattac agccttggag cctcttgaaa gatggaagaa 1680 gtggcaacac gttaccgtca gtggttacca ggagttcttt cattcccatg atgtcaagcc 1740 agagttaatc caagaacggt tatccaaggg cgcgtcatca gctctttctt cgacggatcc 1800 cacacctgtc tcgccggctc cgccgcggtc atcaaggcca tggggcactc cgctgtctga 1860 acagcaatct gtatcgcttg caccccagtt tgcgtccagg tatggccagc cgtatcagtg 1920 agaaaaattg gatgtccaat tattatctaa cgttgacacg ggagtctcct gaagatgagg 1980. atggcacgat ataaatgacg gatggactgc tgcatgccag ggtataccat tacagcgaca 2040 ccagtgacaa ctgtatttgc ataagaggaa caactttgaa ggcgatactc gtgcgtttat 2100 tetetgatea gttteeaaaa ggatagggeg atgggttatg gggaaatgtt ggttgtaeet 2160

tcagtttcgg caacataggc aacatcttt gtaagcggcc gatcaaaatt atgtcgtatt 2220 ttcacgccca tctgggcagt atcttatgct ttacgcaggt tataatatgt tttatattgc 2280 tcatagacat taaataatac atccctttag tgagggttat agcggccg 2328

- <210> 3049 <211> 5395 <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 3049

agtatgactc gtactgtatg gcagccccag tatagaacat cataggcccc gcggttgcgt 60 tgcccagtac actgtgatag gtgactttgg tctgtaatct tatttcaaca tcctacttgt gacttgtaat tttcctatta ttaacctcga gcatgaccgt taacacaggg gcgccagaac 180 240 tgtgtgaaaa gaaaatatat ttataagcga taataaatca ctatgcaaat aaaaaggatt cagaaaacaa gcataatact aaggaagaat gataccactt acactctggc agacagctca 300 atcaaagcag gtctcggccg gttctgattc tggttctggt tctgtggttg ccagtaaggg 360 gagagggtag taaactggaa gcgagggcta gcaggcaggg taatcttcgg ccctggaggc 420 atgatctagt cctggccttg gtgatcttgc tttgtccccc aggtccactg tgtgatttca 480 cacceggeet acagtatett gtactgactg ccaacateca gcagtggtee atacetatee aggagggtac tgtacagcgt agttttggct gccagccaga gctcaatcag gtccatgctg 600 tgtacaggaa acaggccggg aaaatcaggt tcatagcaag gtgctggacc ctgcagctca 660 gcaaccagtg cttccttcat ctccctacta ttagcagaac agagacatag gataagatct gaagggctcc acttgaagag gcagggctta tccaagccgt cttcctcgcg tttcattatg agtgtaatcg tgttgatcag ccagttagca attcgtgcag acaatttctt ccatccagtc 840 aaggagagta ttaggcaggg tattgtttcc aacaccgcca gcttttgctg ctgaggcagg 900 gcagagtcta tcctgatagt tgctgcagaa tctgcattga agtgtgggga ggttatagga gatactgttg gtcctgtgtt tttgttatac aagaaaaagc aaaggaagca ggggtgttaa 1020 gggatcgcga aaagctccag tatttgggct agacaaggca gacttggcac ttgcctgtgt 1080 tggcttcgaa gcggggcctc tagtcttgac actaaccaac gttaaccatc gggcaaagtg 1140 gagtggtata tcagcaactt gcatccacta acggtttgtt ggttcagacc catgcatttg 1200

ccggctttga cgctggttca aaactaacca gtggctaagt agagtaactg attaatcctt 1260 gtcccatact aaggtatgta acatcaacca acttgcttat tataattggc tcgtgaaatg 1320 cctagacttt gttagttcag gcagtataca cttgtattgg ccttgtatta gccagcctag 1380 actatatett etecaceata etecatagaa accaaaatet aaaagttagt agagtacegg 1440 ggtcacttgc actaagatat ataacatata ctaacatata ttaacaaccc ctncaccgca 1500 atgacccagt cacatgtgca gtgcgttgtt ggttcagact atattgatct ggcgatgtcc 1560 gacagetgea tgteteageg tttgaetgag caaetgaace acaetatett taeteteeag 1620 gcaactatct tggttcttgt accttgcata ccatggtttg cgatggccac cggaaattac 1680 aatggcattt cctaggaact agatcgcatg gcccctcagc ggggggaggg aggaggtgtc 1740 cttctcttct ttccctgtag tctttatcca acgcggctat agcaggaagg ccctctcgtt 1800 tggcaaacat gacacagtga tggggacatg aagcatacat accatcctga ttaggcagag 1860 gacaagaaga agggggacag actaccatgg caaaacggat tatcttcccg ggggactgct 1920 aaagttgaac acacgagtct gcaagtgacc cgagatggtt atttggccct aaatgtggtg 1980 eccataeget gageaacetg tiggaeatat titteaatae igtetaeagt aaceteigga 2040 tggaagetat egeageeeca ttttgtteee etgtteeaga geagaettee geteaatggg 2100 agtaacatta agccgtcagg cgtaacagaa atctcccgga cgccgtggcc ttgaagggat 2160 gaggccgctg atgacggctg acatgtggga ttgttttcga aggcacaaat agggttgcct 2220 atttgtcttg aacctaggta agtcaaaatc agacaggtga cttcctgtgc aatgttctgg 2280 agtcataaat aacatagatt tgatcaaata cttcttcctc caagcagcct agtaatagtt 2340 agteggagge etetetegg ttgteagatt atetgateaa etggtggeea tgtaggtate 2400 gtcaatacct ccagggcctg atgagagctt aggtgtgtcg ggccgaggaa agttccttta 2460 ctctgtgcac aaggatcatc agttccagct tttctgggag cgatcaactt ggcgaagatc 2520 tacttcctgt atagtacagg agaaatttat tatatacttc ttttaggctg gcgtggtgag 2580 tgtaagcagt ataaatctta agtaagcgga gctgaggtcg ttggagggag gcagttttgt 2640 gttcacaggc cctcaagtcc gtacccgccg accatagggc tgcaatagcc gcccagagga 2700 agggtggcgt gggtgctggc atcacatcgt tttatcggaa ggatgcagcg atcaatcggt 2760 tatataaggc tgggcacaac ccgttgagtt tagtaggctg ttccgttgcc catctcaggc 2820

cagactagtt gagaacgggt gttgtgaacg ggtgttcccg tctcggcccg cgctgtgggc 2880 aaccgcccgc gcctccattg tttgtcgtgt ttgcgcgaaa gaacctccat aatttcaaaa 2940 aaggagaaaa aggtgttaac tgtcgtaaaa aactgatttt gagcccacaa catgggtaat 3000 gctcagagat tagttgcagc aggcgagagt gaagcaaggt tggtagtcac agcaactact 3060 gaacactaat tgtgcggaag ataggagtag acgctccggc ctcaaggtgt gatgcaggga 3120 gattggatgc ggttctgcgg gactttcgcg gcgattttct aggcacctgc caagctgaac 3180 agactgctgc ttcctacata cgagggtgta ataccacgtc ccccccagtc aatctgaccc 3240 agttcgcctt agtgggcgtg cacccagtca tcgagggcat agaagcaggt acccatcgca 3300 caatatatac tgaaatcagc agaggcaagt tctgactttc gcgtgggtgc atcaagcgat 3360 gatattcaaa ttgctatggc ttgcgctgcg ctgcaccgaa ctgctctgac aaagcatctc 3420 aacaccagcc ttaacccctt ctcaacttgt cagcccatgt gttcaaagtt ggatagctct 3480 cttctaatac agcgctttag tcaattcaga gctctctaag gttttcctct gcaatacaat 3540 caaatctccc caggctccaa tcattcctta atgtccacat tatccttcat cttcttttgg 3600 cgcagagcat caaggatttc catatgtccc ttttccagcg caaggtcttc cgcagtgcgt 3660 ccaagcggat ccttaagata gatatcagcc ccagcctcaa tcaagaaaag cgccatctcc 3720 atgtatecet etacegeage etgatgaagg ggaeteeeca tateaceata ageeteageg 3780 cctggcgggc ccttgatccc aacctcgtca atatcagccc cccttaacag aagatacttg 3840 accateteea ggteeteate aategeegee ettacaattg cattacteee etteageett 3900 gccccatgcg cgagcagcaa atccaccagt tcgacgttgc cagtgtgaac cgcacacgcc 3960 aacgcgctca gatgctcctc gacaaggctg gcgttcggat tggccccgtg ctccaggcag 4020 aatcgcaccc agtcgatctt attgtcggag gccattgttc cgagaatatc gccgtaccag 4080 gggacaacaa agttgatgcg aaccacettg tgcttaacca tcaagcggta cacggcgaag 4140 gagttgtgga caacaaccga cgtcatcatt tctcgcgtgg ccttctggcc gtgttccagg 4200 cagtaggctg cgacctggtt ggcgcgacag tctgtggcgg ccaggagcag atcctcgaga 4260 ggcggggtgt attctaactc tccggctgct tcgcgttgtt gctggaggaa agcctccagt 4320 gcctcacggc tgtttttgcg agcgatggcc cgtatctctt cgctgatgag gcgttcgttg 4380 tagtgcatgg tggctgaatg gttgagatcg agattgacgg gataaaattt caatgaagga 4440

tggaaggtcg gtgtgtttta ctgatcttga agacaaatga gtcactgtta aatgggggaa 4500 gtgttggtag ctacctagcc tacctaccta cttataggta gcgtagcgtt ggtctggaaa 4560 gacttggcgt cggctgaaac aaagacagtt gctcaaacaa gatggtccaa ttgctggtat 4620 ggatgagtta gcctaaagga gaatgtggtg ttcacacggt cctggggcat gtaatagtat 4680 ctaaagtagc cccatctcgc gcggattgtt ttttgaccct gcaggttgta cccaacccgc 4800 accgagtgca tecetagtag tatatetttt ttacetaeta tagateaaga gattaaaace 4860 ggctagggct aatatatagt aaaattccct ttccctcagt tacttattag tttgtcaatc 4920 cgcaccgcaa cccgcagcgg gtcaccacac tgcagcagtg cgatgcggtg caggttgcaa 4980 aatcttcagt ccacgctggt tgcaggttct aataggagaa tctgcacaga tttgcgggtc 5040 acgtgcaggt tctgatgtct gtaatacaaa cctataatat ctatataata tataaaacat 5100 agattacccc tgcttggttt cgatctatac acctggaaga aaaaagaaaa aggagatata 5160 actattaggc tactaagcat tattgcttat ttatttataa ataattaatt tatacaagag 5220 atctcataat atgtcatgtt ggtatctgct agatagctgc tgctggcata gtagtattat 5280 gatattataa tattgcaata ttataggatt atagtactat agagtaaacc ttagggttgg 5340 agactactcc ttaaacttat atagtttgct ttataagtct actagaatag tttag 5395

<210> 3050 <211> 1908

<212> DNA

<213> Aspergillus nidulans

<400> 3050

taattaactc gtgttcgaaa taaataaata acaggagaga gatttttaaa acaaaaaca 60 taccaaatgg cgattataat taccaaatat taacgtcaaa cctcacgaaa agaggaggta 120 gtaccaagag agtcttatgg accccagaac ataaactata ttaaaacata aaaaaggccc 180 aaatatgtag aagaaagaaa aaaaagcttt aaggacccac aaaagaagta gaataaatga 240 gttccaaggt atgaactcaa taaccaaaaa aaaacaagtt ttggtctggc aaaaaatggg 300 actatggtgt gaacagtaat atgctaggaa aaccagagta tatcaagctg gagatgagac 360 aaaaacaagg tctttagaag aaatctatgc ttagggatta gtagcaaaat acattcccta 420

ggagggcgga	gggcaaaaat	cgattaaagc	ccatacaatg	gaaagaggta	tgctacacta	480
aattgttata	tagcacccaa	ttgcaggcac	ttaattgcca	atcaggcaac	acttcagttg	540
gccccattaa	tcttatttaa	taaggggaac	actaaatggg	gggtttttt	tggatggcct	600
aatagaccat	aaaaagtaac	tttcggtcct	tggttctgaa	ttccttaaca	actggccata	660
gatacagagt	tccttagacg	acttagtcca	tccacacccc	ccccccggg	cgctatcagc	720
acctcattat	tcccgcccta	gcatgcttcc	attccttacc	accatctcgg	gtacgctaca	780
cttacatccc	atcgctatca	ctccgcatcg	tcttttattt	atttttttc	tgggtccttc	840
ttgctttttg	acttgggctg	tgacttttgc	tcttgtcccc	gactcgattt	ctcttgctcg	900
tgctttgacc	gtccgaccgt	tggttgcctt	gctgacggcc	tctgtgcctc	cgtgccatag	960
actaccttgc	ctgcctgage	tccccgtcga	tcgtcacccc	tcttcgtgtg	accttgggac	1020
gcgaaagtat	acattgccaa	agaaaccgat	cgatctcttc	tcttcctcat	cccttccgct	1080
cttcagagac	gctggacgaa	accgcccgac	tgcaatcgcg	acggagggtc	tcccacttcc	1140
ccgcccatcc	gccccctcag	ctgcagctga	ttgcctcttt	gggaacctct	tgggagcccc	1200
agcttcgccc	ttgctcgtcc	tgctcgccca	acgagccagc	caccctgttg	tgttctacgt	1260
gggcataacc	atgttctcgt	gactgtatga	ttgtcgcatg	cgatagaccg	cctgtcgagc	1320
atctgcgccc	gcccaacccg	cctacgcgag	acgtcggagc	tgctagcatg	gaaatcgtca	1380
ccacggagga	gaaatcaagg	atcttccccc	agtactccgg	cccccgcct	ccaatgcatc	1440
gcatcccgcc	cgcggaagcg	ccgcatggct	tgccaggggc	cccgggcctg	tacgatcagc	1500
catggcgccc	gtatccccat	atgaaaacca	ccatgccgaa	ccacggcggg	tcgcgatcaa	1560
tgctccgcag	cctccactat	ccacgcatcc	caactacccc	ccaatgcaca	gtcgggagct	1620
gccacagete	ccttcggacg	gtccttttag	ccggcccgcc	agcctacctg	tgcccgcagc	1680
ccacgcaccc	cccgagcccc	ctcagccgca	gcatgccaat	taccacccga	tgaacggtgc	1740
catgaatggc	gcaccaccgg	aggcgtcgcc	cgtctctgcg	cccgactacg	ccagaactcg	1800
catgtcgtcc	ccaccccagg	agcagatcgc	caacagcaaa	ggagatcccc	cgcagccgca	1860
gcaatcgctc	ccaccgaatc	gacatcggac	ctatcttcca	tcgcgata		1908

<210> 3051 <211> 3377 <212> DNA

<213> Aspergillus nidulans

<400> 3051

60 ggcgttctgg cgacgagatt ggcggtccaa gccgagggta actgagctca gcagtgactg gtacgctagc gattcagaaa tgcggagtgc aaggttttat tggggaacga ggagtttgat 120 ggtagtggaa ggctgtgaac tagacgggtg gaacggtgtt tgcccgttgt gcgaaacaca 180 tgacaagctg gacttgaaac ggataccgcc gatctcaggg ccttgtcgcc tctttgtggg tatgagactg ctgaccgctg agatcgctga gaccgctgag attgctgagg ttgctgaggt 300 tgctgaggtt gctgaaaaac cgctgaagac ccctattcag gatgactaca aagtatgtag 360 togatggatg aatatatata attottotog tittototit tootittaco coaggiggoa acgttggcta tgcatcggct gtatgtcatt acctataccc gacgtccttc gccgcgattg atctaaaggg cttgtgctta tagcttgtgc ttatgaaggc tgatcacact ggagttgtac 540 600 cttgcaatgt ggggattaca atggaagata gagatggacc acggctccat ctttagcggg acacctatgg aagaatgtcg tacccacact gtcgggtcgc gcctgatgat cgggaaatat 660 cttcgtaatt agctgacggg cccaatgtac tcagagttga gagataatgt taggatgcat 720 780 ttccagttcg atcctatcat ttgcaggcag ctggatggct gtctgtcagc aaaggaggaa tcacgcaatt tttcttggcg ttgagcaatt ccataagacc cataagccgt tgacagcgat 840 attcaatctg gcgagccccg ccaaattgct tattctgcta atgtgaatat aagatctcga 900 teccegtaag gtgatttegt egggtegteg ettggtegeg tegeeggtea tgtteateea tegeogattg teategaatt cateaggata ttgttactgt gateaagate gaeageaega 1020 atgtaaccac agtgatctag tccatcagcc cagttccctc ctcagttctc aattgcgacc 1080 cgatcaactc accgccgttg tcaagaaccc gatgcagttc agttcccaac ctcctgcgta 1140 taccgtcccc agegegateg cactetgetg tttccagaac cgatgegete ccaggatege 1200 cgtcacgatg gccgcgcaat ggcacgtcac cgataacggg acgccgactt catggtatcc 1260 gaggcctttg cttgagccgg caaactgaag gcggaacagc tgggcgatca ggacgccttg 1320 cattgcgagg atcacggagg tccggatgta cgcgagaaac gttcgttcga gagctggtgc 1380 gtcagaaatg ttagcattgc tcatcagcaa tcgatcttcg atcgagtttc caccggtctt 1440 tetteaatet tegateeatg titigeegtet titieeeteae aaeggeagge egagataaga 1500

gggggacaag gaaataccga aataatcccg attcttcttc tgcgccactg tcaagaccac 1560 atgcctcgtc cagaaccgtt gaatgcgccc gaggagcccc tcgcgtcgtg gccgctgcgt 1620 ctgactggtc gaggtgcgcg ataccgtccg ccgcgtggtg atgcggtatt ctccagagga 1680 gatcgacacg cctgaatcgt cgtcctgctg agtttcgatc tcgtgcaact ccaggttgtc 1740 tgggtccagg tgggcttcgt tgcgcggtcg cggtcgcggt cgcaggctgg cgctggtgtt 1800 ggtgtcggtg tgggacgacc gtgagtcagg tctcggctct ggccccatgg ggtcggcgac 1860 agcttggggg cgagaaggaa ggtggtctgc cattatggat gaattgaccg atactcacat 1920 atttactgct gatgcagcat gaacagaatc agatgggcga agaacctgga agagaaatcg 1980 ggaatccgtc agccggatgc gggtctggtc cagatgcgga ccgttggagt tggggagtga 2040 gatcattggc cccgcaacaa gtatagctct ctatcgggta tttaatgatc gagttgtgaa 2100 cagaaggcat caccttcaac acaccaatat tcaaaccaac aatttcgtta agacgcccag 2160 aggtcccgac cattgcctat ccttgagccc ttgacgcaga aaacctgttt tctcatctgg 2220 cagtacggct gtcgttagga ggacgggcag cactgattca tgctttttaa ggggaaaatg 2280 tttaaggaat caatgtacga gcgggaagat gaaatctgat atctcgtcgt ccagatgtca 2340 tacctegtee atgaagegge tecceggtta aagegeegaa eteatatgag geaceatata 2400 gcagaacaga gtccagcatc agttgccagt taaaatgtat cagtaggtta ccttgtttga 2460 gacacatttg aggtetaeta caatgggage tgtgeteata ettgtegeee geacaetgat 2520 agagccatcg cacggtatag cacaacacca acagtatatt ggcgggataa aaatgggatg 2580 tccaatggca acggcgctta agtagctgta gtagtattgc aaatagagag gttggatgaa 2640 gcaaactata aagtgaccat atctctgtct ttaagctggt aagactgtct gtcagtagcg 2700 gageetgeea ggggggteag catacaaaga tettgttatt egtgetetat ageeagtatt 2760 cageceagta caacteetea tigittigit etitteatit etitetitet tietitetit 2820 ctttttattt ctacttttat tttccctgcg taaacggcat tcaggatgat aatcctctgt 2880 atacacaagg agatctgtct aaagccactt gcattgtgga cagttctcac ccttccaccc 2940 ttgtccagag acaacagtta tgctctgtaa catcaagcct ttgagaaaat gggatacttc 3000 aggtcagacc actgtcctga aagccgatgt cggatggccc catgcgctca gcggtatggc 3060 cgcgatagag atcatggcgc cttccagacc tatgaagata gtctcctcat tcgctagatg 3120

gctatcagat tcatctctcg actaaggaac gcggaacacg cttcaaatag atgcaagcag 3180
atgcccgatc ccggtatact cggaacgcca cccaaagttt ttaggcccgt tgccggcact 3240
gtcgagttta acacaacacg ttaacaaagg cttggagaaa tcatcggagc tgactcgagc 3300
ggcaaccgca tagtaatgat agaaccttag ggaagcttag acaattcccg gtccagtaaa 3360
gacgcaccgg atggagc 3377

<210> 3052 <211> 1182 <212> DNA <213> Aspergillus nidulans

<400> 3052

cccaatatcg ttatagccga gcacaaccct tgaacgggct cggcaacgta ctttgttatt 60 caagaatagg aacagtcgca aaccctgaga aggctgttca acttcaatac caagctgtta gatcaatact aggaaaccat cctgtcctgg catgatatct gaacaaccct aaaactgtgc ttggcaaaga tacacaagaa cagaaaaagc tgctgacctc gaagtgtcac tgatgctgca cgaaagctct taaccaacgc cggaaattta tcctgactgg ccattacatc taataccctt 300 gaacgcagga tataagtctg gtttgtaaca gcttatgggc atatgacagg acaggaggaa 360 tggctgacct tatggagcca tttccaatac caatatgctt tacgccagct aaactctttg ettactactc ggatacggct ggccaaacag tacttcagca tettgctacc atttcaagtg 480 gcagagctat gaaactgcct gggcctcaat tgtttgctta ggcgccttgc tatggtatca 540 agacttggtc gaacccataa cagttataag taaactggtt ataacccagg atttaccacg 600 tttccttaca tttcaacgga gctcatatct tggcggattg gggtgggtcg gagcgggatt 660 cagggggggg gattaacaag actaggtgta tctgctccgt tatccagttc tatattccgg 720 agcctgtgcc ttgttatatg gatcggtggg tggacaactc aaaccagagg agtctggcag 780 atccaaacag gtcaagggtt ggggaaggta tataaatatt ttgctatatc agcagcactg 840 ctaattcaat atagttattt atggcttctt gatatgtcag tgacgaatta cccgtagaaa agtaacagcc gcaatctatt caataggatg gccagaaatt ggatatgggt agagagatga 960 aaatagtcgt taaaattcac cgtcacacga gtcaactcga gctggtttac tatatcgaaa 1020 cggcctgcaa cctggaagtc tcccggcact ttgcattgaa ctacatgcca gatgttagag 1080

ctgattggca	aactactgta	gcgagctata	acctgcttgg	aaattgctgt	acgcctttgg	1140
gcgcgaaaca	ccagagcatc	ttctggcaac	gcttagcacg	tg		1182
<210> <211> <212> <213>	3053 1169 DNA Aspergillu	s nidulans				
<400>	3053					
cggcggtcca	tgtcttttct	gagaggcgat	aatccacccc	ggaacacctt	gcggcacaca	60
agaagtcagg	atgtgtttgt	gcagctggct	cgctcgcaat	accagcagga	cctcatgagc	120
agccctgatt	ccacagettg	gggaccattg	accatggcga	aagtcaggcg	agagcataag	180
ccgtttagaa	aaacatgccg	gggcacaagc	gctctcgacg	gtacatccgt	cgcagaggcg	240
cctttggaag	cgctaaaggg	ccctcagtcc	cttggaaaag	ccagagcctt	ttcgaccacc	300
atcaagaaag	gcatcaaacg	agttttgggt	ctttccagga	atgtgtctga	gcagggaaag	360
gtgcatgcat	tcccatcatc	ttcccgtcaa	ttcgctgagt	caccttcgac	tgcggttgat	420
aaccgagacc	gattgcccgt	gacggctgtg	cagccatgaa	cgaacatatt	tacgaatcag	480
cagagatccg	gcagccaacg	atacggagaa	tgcagagctc	tgctagtctg	gccacaagtc	540
gctctcgggt	gacgagttgg	gcggattcca	ctgctgctaa	tacaattgca	acccccagga	600
caagtgccca	gcaacgcctt	tccattgtgt	ctgaacaaga	gaagcttgtg	cgtcctgatg	660
tgccaccagt	taccacagac	tccattgcaa	gcaacgcagt	tgatagtcat	cgtttatttt	720
ccgccctgat	gaaacgaatc	ggaggaacaa	atgctcaagc	ttcggaagac	aagattgtca	780
tcggacaagt	gaaggagcat	cgggtaattc	ctactcaagg	gtcgttgact	tcccaccaca	840
gcaaacgtac	catccgccaa	gtttccagtg	agatctctgt	caactctcca	agatcattcg	900
ctactgcaaa	tggcggccca	attacgcctt	atgagcagcc	acaggtacat	ggcgcatctt	960
gtgcacacag	tgcaggtctc	acaactaaag	catatcaaga	gagcaacaag	accgctgagg	1020
gtgacatttc	acgagccgag	tccgcgtcaa	gcgtttactc	tcgatcgacg	agcgggctct	1080
ccccaagct	caaagctgcc	cgtgattcac	cagattccgc	ggaagaacca	ggggtagcaa	1140
cgatctatgc	ctctgaaagg	actgcgtac				1169

<210>	3054	•
<211>	2703	
<212>	DNA	
<213>	Aspergillus	nidulans

3054

<400>

60 gctggggcat agctcaatat cacagttcta tttatgtaga attttattca gttacagtta ctatggcagc taaccaacgg ttgtccagtc aggctcctac tatacaggat acagagaaca gagtagctag aaaggtcaat atgctgactc atcgcaccgc aacccagcta ggccagagat 180 cagatcagcc teggttetee geaaacceca ggeageteet caecegaate ggatecataa 240 agccacgcgc actgcttata aggagtgcct gtctttgtct ttcctatttc ttccctctaa 300 ccaccatege teettteete ttgeacteae tteegtteet aacceateet aaccecaaae ataagcaaaa tggccaccac cgcccgtcag cgtctccaag cgctcagcca gcaactagtc 420 gaaggaatac ccgacgcagg cactttcgag gacatcccca aaattcgaca ggttgcggga 480 540 gactcagttg ggccgtatgt gtcacagtta tcttgcctct tatatgcatg cgggtatggt agagcgtcaa actaaccgag atgtatgtat gtagtcgagt gaaggacaaa gtcgccatta 600 660 tcactggtac tccatctact taccactgat aaagatatta ttactaaaga ataaaaagga acaaactctc ccctgggcat tgggcgcgca acagcgcacc aattcgcgcg caacggtgcg 720 aaggccatct atatctgcga cttcacgagc acacaccttc ccacccacgc ccgggaaatc aagteeetet acceetetgt egaegtgeae aegegeaeet ttgaegeage agatgaaget gcgctgaagg ctgtgattga cgaggccatc cagaactacg ggcggctcga catctttttc 900 gccaatgctg gaatctcagg ctctaacgtt cccttcacgg aagtgacagg tgagcaattc gcggagacgc tgcggatcaa cacagttggt gtgtttttag ccgcaaagca tgctagtctg 1020 gcaatgagga agactagtcc cgagaagaaa taccctggag gcagtattat agctacagcg 1080 agtgtggcgg ggttgaggtc gaatgcgggg gcgacggatt acagcgcgag caaggcggct 1140 gttgtatcta ttgcacaaac tgtggctttc caattggctg ggacggggat ccggattaac 1200 gcgatctgcc ccggggtggt agagacgggg atgacagctg cgatgtacga ggctgcgcgg 1260 gcgaggggga cggagcggaa gattgggcaa ctgaatccac tgcagcgcgg tgccgtggca 1320 gatgagattg cacgggttgc gctgttcttg ggaagcgatg agagtagtta cgtgaacggg 1380 caggcgtggg cggtttgcgg tggactcagt gctggtcatc ctgtggttcc cggaaagttg 1440

gcttgattgc tacgccgaat gtatatacat cttcaggctg aaattgaaca ttctcatgtt 1500 ttacttatag acaagtatca attaactaaa tccaccagct acggtgagcg aacacagagt 1560 ctgcgcttct tgagcacagc ggcaactttc aaagcagctc cgttgcgaag aatatcgaca 1620 aagggaatcg ggggagattg atcggaaata gtgggagaga gagagagagg ctcgcccggt 1680 atatggaggc cgcgggctat ctatgtaaag gcagcaaaag acgccctaga acgctacgtt 1740 ctagatgaaa gaaaaaccgc ccgacagcgg gcgcgaaggg tggggaatca agctaggccg 1800 tcaaccggac ggccttcaac gaaaagtgaa ataagagaaa gaaaaatgct cctccagaaa 1860 gaaacaaagg cgtccagaaa gtttgtggca gtggtgagtg aatatccaag acggaaacag 1920 aaagatcaaa acacagaaag cgccaagatt gttcacaact cgctctagat ctgacaatat 1980 tgtgtacgga gcagatgtcg tgtcgaagtc gtcgaaatca aacgtcatcg tctgtggatg 2040 aaaggtetet aegegageat gegaggggtt gteegeataa ggteetegtt ggaatgettg 2100 gagagagtee cagetteget tgggttateg agacetteeg ttteatggge gtgetegtea 2160 tegteetega egateegggt egggatetee eegggeeeat aetgetgaet tgaeetttet 2220 gggaatgttg agctgctgat catcgacatt gaggtgcttg accggttgtg gacaagatct 2280 ggcgtaggag gaacgcttgt ccggccatcc gggtggaggg tgctgacctc actgtcaccc 2340 atctcactgc cctcgcgagg ggtcatcatg ccgcgcggct caagattggc tttgctcggc 2400 atggcatege catectetge atcetgggea agttgeagae cetegaeage ageggeaeae 2460 tgctcgctga tgctgcggat aatctccgag atggcatccg tcttgtcgcg taagtagcga 2520 teggeaaegt eagttaeget gagaegegea agaeggegtt etggttgaee aatgtteage 2580 aggtgttget etaggteegg gttgataete gacacacegt ttgaagatte gtttgtette 2640 acgteettet teaegttett atcettgaeg gattetgege teteetggge etgtteeteg 2700 2703 gcg

<210> 3055 <211> 801 <212> DNA <213> Aspergillus nidulans

<400> 3055

atgggtgaga cccaatctta agatccactg ccttcgcgcc caagatttgc tgcagggcat

60

cgaaagcctc ageggetget teteggacat cateategtt gtcaaccaat gecacaegga caatggatat gagaatette tegtagteet egagggcate tggggaggaa gatgegatga tttccttgag cgcgatacag ataccttgct tgacatccac atcgggggag gtttggagac catcttcaag agtaggcagc aaagtggcga gaacagactc tccggctttc ttgatgagat 300 ctccaagagc attgcttgca atgacctttt gctccatgtt ggaagaacca agacggcgaa tgatgagctg ggacaaggtg gggaccatct ctttgagtgt tcttggagac gcgacaagcg acttccatac acccattgct gcagtcttga cgagaccgga agtatcgcag cggcagataa 480 acagcgcgga caagaccttg tctctcctct cctctccaag aacctcgagc agtgactgtc 540 cagcctgagc ggcttcttca tcctcctctt cggcctcggt cttggccgtg atgcctgtaa 600 tactgaagag cagatcacca accaactcga cggaactcaa cctgatacgg tagctatcat 660 ccgcaagtcc gcgctcaagt tcaggaagca gaagatcgat tgccttggac gagaagttct 720 tgaccagcat gcgaccggcg cgatacgaag tctcacgaat cgtgtcgaca tcgtcagcca 780 gaccagccaa gataggttgg a 801 3056 <210> 761 DNA <213> Aspergillus nidulans 3056 <400> ggaccatgct tattacagtg acgcgacaag tttttgtcgc ttcgcaggat atagcggcat atgctggagc attggaattg caaaagaggg catggactgc tatgaaggcc ctatctggca atttaactaa ctagctaact aacgtaattt cacagtcgag ctgaacacac aagcgagctg 180 aacactaccc tgtagatacc caaaaacacg tcttcttaat tcagcgagcc actatggccc 240 cggcacgctc tcaaaaatgt caagattcta ctcagcaata aggtaggctc cagcttgtct 300 360 taaaagctat aaacgagaca aagcttctct cgattcagtg aagctacacg cgtttactat gtgcccctct ccgcgctgca cagtcgcatc cggggcaccg catggcgctg cttttctccc 420 tatetetatt etgaaceeae getttgttet eeagtgtaet egtegaatea gtgtgttgea 480 actetegatg taceatgatg ateteactet tatacgegtg getteaaaag gaagacatet

taattttttc aatcactatg cctcactttg attctcttgg tcgttatcat gaaattaaga

gataattaat ggatatgtct ggaagaaaca aatctacaca gtcgaacttg tcaaaagtaa 660 ctctcagggt caagctctac ggacattgaa gaaaaccaga ttctatattc tctatcatac 720 cttggcttag aggcgcctg tgtagatatt ttgatttaat t 761

- <210> 3057 <211> 2734 <212> DNA
- <213> Aspergillus nidulans
- <400> 3057

60 tcgacatcct gaacgacatc atagccagac ttaagacaga tggagaggg atgttgaagc 120 taaacaacgt ccgggcgttc gcagagatgc tatttgaccg cggccagcga tattgggatg 180 cggagcagtt tgatccggca attgaatctt tcacggaatc ggtaaaggtt gataatgcat 240 gcttcaagcg gatcttgact atcattgagc aatactatga taggcggctc tggaaagata 300 tcttggagct gctaaagacc gttcaagccg gtgctgtctc tgacactatt accggctctc 360 gtgagagaaa aggcaactct catctgtcca ggatgctcgt cgaccttgcc tcggaagaag 420 cattccacag catcattctc catacagccg tcgaaacggg acaattcgat ttcatcgaga 480 ccgtctacga agacgccatc aaactctcag cccaaatgga ggcttacaca agcctcttct acattaggta ccactacgca aacgagattt ttcaacagga cggaacagac agcgaagagc 600 gcgctatagt tctgtgggaa acggcgctga aagaagacct ccctcgctca ttcctggaca 660 tegactaegt cetgeetagt ttgacaetga aacttgegee aacetatetg tetegegeae 720 gatctgccga gccgaattca gacttagcgc aggaatattt acaccgtata gcctcaatca 780 caccggacga aggctcggcg tcgtcagcgt cagcgtccca aagcaacctg attctcccag 840 ccaagctcta tctcgcgcgg tactacgtcg tcacggggaa taaggaaaaa gctaagcaaa 900 tcgtgcggag tgtggtaaag ctcgcgttgg agatgctatc tgatgatgac gctgataatg attatctcgc ttattggagg ctactgcttg tgtttttgcc actggatgat gacgcgaatg 1020 cccttgttgt tgtggcaatg gttgttctgg cgagtcgggc tgctgctttt gggaatgtta 1080 atgcgggctc tggcccgggg atttcaatgc cgctgattga cgagccgacg aggactacga 1140 acggaaaaga ccataacagc aagaaagaac ggaaagagca aagtccccgc agtcgacctg 1200

cagtaaacac tgctagccct agcatcagtc tacaaacagg ccctgggacg ccagaaccca 1260 ggcgtccagg tacaccgaat agtttaccgc gcacgcccga gcttaaacct gtctcgcttg 1320 cggattcgca ctcgcactca ctctcagagc cagcttcagc acctgcgtca gcaaaggggg 1380 acgacgtaga cgacagtggt gaagacccat gctccgtccc tgttttcgcc atctgcgacg 1440 gcagctgcgg gcgctactgg caaggtgcga gtgagatgtg gtggtgcaag gactgcatta 1500 atttaacctt tgacaaggag tgttttgagc agttgaggag tgggacccta ccgttgaagg 1560 tttgtgatag gagccatgca tttttggagg tgccgaagta tgatagtcat ggtcctgatg 1620 gagatgagta tggtgtgccg aaggggtttg taccgtatat ggggaaggct atttcgttag 1680 aagagtggaa gaaggcaatt gtaagggctt atatagagta gaccagagtt gactattagt 1740 cagttgtata tacactagct ttttggcgct tttgcataat acgaggcaag ttaagtgtaa 1800 aggtgtcttt gtagaaacta gggcaacgta atactttctg aaaatgatgg cttatgtgct 1860 agctaggcgg gttatcctca ttatctgagc atagtgcttg gctgccgacg acccaagaca 1920 cctacgaacc tctcaactcg atttcgattc atagtgaaat acgctcatgc cagttcatct 1980 ccactttcag ccaaatccag aaaaatcgaa gcacataggt atacgcctta ttctccatcg 2040 cattccacat aaacgaaaca tcacgcccca ttcgcacccc cattgctttc cgaaacaacc 2100 teetettete gaatgtegeg gacaataage tgegetteae aaaatteagg gettteataa 2160 gctctgtcca gccaagccag catattcttc caaggtatgg gtaaaataca ctctgcatta 2220 agetecteec tgatgaatag caattecace caegatetaa tteetggate tetgtgattg 2280 agattgggac gccaagtggc ttgggggaca ggacatacgc acgacagcgg gaggatacga 2340 aggatgggaa agatgcagag tctaaacctg cgttcttgct tccggtagtg ttgggttcgg 2400 aagagatgag gtcgaaggat ttagtgtgta gcgggttagc gaggcagagt gctgagatat 2460 tgtcgcgcca ggcgggccct aaaacaaaat tcatttaata ctctttttct gaatcaatag 2520 aaggaatgcg tagaagagac gaaaggacca catacaattc cttaccagat acctaaccgc 2580 accaagteee cettetgaag caccaataat tteaatttte geateeetee teacaageet 2640 tccacgaget gegagaatte etcaaaaaca gagttaacat gtteetgeea atttetatte 2700 2734 tcagggatct tgtcctccta gtctcgccag agga

<210> <211> <212> <213>	3058 861 DNA Aspergillus	s nidulans				
<400>	3058					
cgaaaatgtt	cctcgacatg	tttctgtacc	tttgctctgt	gttattgccg	ttatctctgt	60
cgcaggcact	tccttcaccc	ggcagcgttg	ataaaccatg	ccgatactta	ccaggcgata	120
ccgactggcc	tactgaagct	gagtggtctc	aactcaatac	aacagtgggt	ggccgattga	180
tcaagacgat	tccgttgggc	tcgccctgtc	acggttccag	ctaccgtgcc	gccgaatgtg	240
aacatctgca	ggcagagtgg	acaaacccag	agattcagta	agccgctgct	cgaccttgct	300
cacagtcgct	attcttgctt	gtttaaggat	ttgaccttga	acgcagtgcc	gattccccat	360
cctcttttgg	agctccgctt	ttccaagatc	aggcgtgcga	tccatttacc	aacagatcga	420
gtccgtgtga	gcttggcaac	tattatgtat	acgccattaa	tgtcaccagc	gcagcagacg	480
tcgctgctgg	acttgctttc	gcccaggaca	agatgatccg	acttgtcgtc	aagaacaccg	540
gtcatgagta	aagtgcctct	tcgccatctg	gacattgctt	gctcactgtt	aatccccttt	600
tttttccagt	ctactagggc	gatcatccgg	caagggagca	ctgggcctgt	ggacgcataa	660
tcttcgctcg	atctcgatac	tcgactacaa	cagcagcctg	tacacgggca	aggccatgaa	720
ggtggggagt	ggcattcagg	tgttcgacgc	ctattcagcc	gcccaccagg	ccggacttcg	780
cgtggtcgga	ggtacctgct	tgaccattgg	actggcaggc	gggtacacac	agggaggcgg	840
acactcgatg	ctctcgacag	g				861
	2050					
<210> <211>	3059 813					
<212> <213>	DNA Aspergillus	s nidulans				
<400>	3059					
atgtacgtgg	gaaataggaa	attccttacc	acatccatag	aactgataag	gcctgcaccg	60
tgggtaaact	aatacggccc	tcttccttgt	caagtaatct	tttggcttcc	gtgtaaaagt	120
tcgttcgcag	atcagataga	ttgtcggaag	agtaagcctg	acataaatga	gtgtctgaaa	180
cacgggatga	cagtcaaaca	gagatcaaac	atacacatgc	atcagatagt	atgatgttca	240
ccaggagcgg	cgagcaatac	gatgctgaaa	gggatccaga	ttgcatatcc	cggatgaaga	300
		_	-		_	

gatcgcgatc	gatgaagttg	cagatcggat	gtacccacgt	aaaccaggaa	gaaatcagcc	360
tcgagacaag	atcgtcgtcg	tctataatgg	aggtccaggg	tcgcgcaggg	acagagaagc	420
gtggagcgtc	agaagacttc	ctggcgtcaa	gaatatggcg	ctgaggcagt	tcaacttcca	480
agagctctgg	tgtctgcgga	aggttcggct	gttgctcgat	atagaagcga	atttctgcag	540
gagaggcatg	gctgcggatg	aggttcaaaa	gagggattgt	gctgcggttg	ctactctcgc	600
gaaagaattc	gaggaggcgg	accagtagat	cttccttatc	ttccaacttg	tcaatcttgc	660
gcttgaggac	tccacgacgg	cgtttgtcgg	cggtttcgtc	gagggtacat	tcgaggcggc	720
ttttcaggca	gttggcgcag	ggaggagctc	cggtacacta	tcaacatata	tcaggcagtg	780
taaaagcgga	gttaagcact	agataccttg	agc			813
<210>	3060					

<210> .	3060	
<211>	518	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 3060

taaccaccat gagcgccgtg aacgtccttg ggtgtctcag taacgtcgaa gggaacatgg 60 ggtacgctgc gaaaaacttt tcatatacga aaaacaggat cagcagcgcg atcccaagcg 120 tcaggaaggc aatgactttt gcctcgttcc agggatactg ctgccctccc cagttcagcg 180 atataagaag gaaaaccagg ccagcagtca tgattagccc gccgatggag tcaatgcgtt 240 tcacttttc gatcttgctt aagccggccg tgttcgtacg gggaggtggg ttataaacc 300 accagatcat cccagctgtc agaagattcc agatcgctac catacacgca cagtaccgcc 360 agttgtgtt cgcgatcaat gcgccgtaga gacttcccgg cgcgaagggg aggaagctcg 420 ctaccacggc tgcaatgtag tagcctctgt accgggtagg gacaatctcg gcgattgcgc 480 aatggccatg agttctgcac tgcgattcaa accattga

<210> 3061 <211> 1762 <212> DNA <213> Aspergillus nidulans <400> 3061

cctcaagggc gcatcgcggc attctcgttg acagtcacca aatccaacga agcgcctca 60

cgcttgtcga agtagatctt gttgccctgg tgaacgatga cgatatccca agagtacacg ctgcgaggag cacacatgag catggagagg atatcggagg tagcgaagat ggtggcttgg 180 ttcttctcgg ccaattcctg gataacggga tcctgcgacg tggtgacgtt gtacgcagcg 240 cggtcgagag cctgcagtcg gcgctcggcg ttcttgacag gggccttgtc gtaggaacgg 300 tegtagtagt agaggaatee gtaegtgteg acateetege eetegggtge etgtaggtte aacttggaca agcggttgaa gtcaacctcc tcgagcatag accaatcagg gcgaatgttg actgaagget egegagteet etgeggetta tegtagtett tecateegaa gegaegaece 480 cggttgccgc gggcgccacg gttgtcgtag tagcggtcac caccttggcc acgaccagca 540 ccaacacgct ggaagccagc acggccgcct ctctggcccg cgccgccgcg ctgggcacgg 600 tcacggaaga cggtgccacc gccccggcca aaggtgcgct tagcggaagt gcgagtgttg 660 tcaaccacgg agaaagtaga ttcgtcttcg gcaacttgaa cggcgaagag gctagaagag 720 ccagctgcat atacttgttg atctggatga cgatattcgt tagatttgtc ctgtaagcga 780 tgggtggttg gtcatttcca tacctctgta gttgcggttg tatgcctgac gaccgccacg 840 gtcacggtct ttggagtcag cagtccaatc agccatgcgg cctagcttgt cacccttgga 900 gaaaggagcg tagggcacgc catcaagcat gttgtccgcc taggtgacag gaccccaggt gtcctccgcg gggagggccg caacaatatc tgcgatggag atcggggcca tgatgtcaaa 1020 aaataaaact acaagtaaat taaaacaacg ttgacctgaa tgtcacaaac aagcccctca 1080 gaaaccgagg tagccttatg agatctgggg acggtaagct tgcaggcggc gggatattgg 1140 gaacccagag aaaggcgatt ttttgtgtcg cgagtggtac tgtggctggt ggacttggca 1200 ccgccctatg gagcagtaca tgcctagcca catttatgcc tcaggtatca acactgtata 1260 cccaaacggt acgtgtttat agtcgttgca ttccgcactc tccttgttga caattcaact 1320 ctgactgcac agagaaaaga gttcccctct gagaccttga tacgaacgtc actcggctat 1380 ggcagcctca tacattcatg acatatccga accettgagt etgtgttgce gtccctaaac 1440 cccatcgtcg acccacggat tttgtaccct ggtcaatcgc ctgactctgc tgataccaga 1500 tacatgtatg cttcattacg taattgacta ttttcttagg gagccgaaaa tcctcttgga 1560 cgaatacctg aaatgaagaa tccatgacgc cacttttttc aggtgcgaag ccgcctatgt 1620 gccagaaatt acaatttaac cattgcccaa cttgcaatat ggttatgata agaaatgttg 1680

<210>

<211>

3063

883

cctacccact	gcacaccggt	ggtctaagcc	cttattttt	tttttttggg	gggggggttt	1740
ttttttcccg	gctttttatt	ga				1762
<210> <211> <212> <213>	3062 1128 DNA Aspergillus	s nidulans				
<400>	3062					
ctggggctcc	aatatttcag	gttcgggccc	catggccttc	cagggaacgt	tgaccatgca	60
cccaatcgca	ccttcagcct	tagcgagatg	actccctttg	gcgcgcggat	gatgtctgag	120
gtctggacgt	gcccggcaaa	tacctccttc	acttctttag	atccggtact	ctatgcgaat	180
cccctcctaa	agtctgctgg	tgccggtact	tctaagtaca	tccgctttct	cttgaacggc	240
gcacctcttc	ctctgaaggg	cctagttggc	tgtgagcacg	cggtgaatgg	cttttgtcct	300
ctggaagggt	tcctgagcgg	agttccgact	ctgaaggagc	gcgcgcagta	ccagagggct	360
tgcttcggcg	agtaccctac	tggcgaacag	gttggtgatg	gtgttcctcc	tccggcttaa	420
gactctcatc	agcagctgtt	cctattcttc	tttcttggga	gggggattgg	aagtgctctt	480
gaaagagtca	gatattttat	cttgggggtc	tattcaagcg	agtagcttgc	ttggccatct	540
ccagagtcgt	tattgagacc	tacccaaaaa	tgtatgataa	gctagatttg	ttgcaaatca	600
tacttctcac	tggaggccct	ttcctcacța	ttccttcaac	taaaagtttc	catcggggca	660
ccgcgcttgc	ccggctagta	ggcccctatc	acctaagtac	actattttac	tcggactgag	720
acatctcatg	cagtacttcc	tgtactatat	taccttctgc	tcccttcgcg	cccaccacga	780
catgagggcc	ggtgaaagta	acgcatggta	ggggcgcttc	ctgctcgcta	aaaagggtta	840
gcatacagat	agagcctgtg	tgggagcgga	gctctcatgc	tggacacctg	cagatgatcg	900
gctataacat	gctctcctgt	aggaacggct	gcttgcaagc	gctcagctat	aatataagat	960
gctggtgcct	gatggacaaa	cccgaaggga	atccatgtgt	tġtacgtaca	tagcttttga	1020
aaaaatcact	aggacagaca	tgagcatgta	cgctacagcc	taggatttgc	tctgggatca	1080
tgcctggcgc	ggtcggatct	agacacatgt	acacgatacg	ctggatct		1128

<212>	DNA					
<213>	Aspergillus	s nidulans				
<400>	3063		,			
tgtttataat	gggtgccccg	aatatactga	agctttggga	gaactgtcta	aaggctctgt	60
ttttagggct	tttttttct	agattaagta	agatgctgtg	gtgctgtata	cataacgtaa	120
atcataagta	cgtcacatcc	tcacccttgt	tgtgttctca	aatacctctt	acgctagtag	180
acaacttccg	tgctggcaac	aacgttaggc	gaggattcaa	ccatcactat	ccgtgtacaa	240
tctgtaaact	ggccacttgt	aactccgcag	gatctctgtc	atgtgtgttt	tgtgtggcta	300
attcatatct	ctccctgctt	ttatctggac	ccgactctgc	taggccactc	ttagttggga	360
gctcaaatac	acggcgctcc	gtagcctcca	tctcaacagg	cgaatcagtc	ttgtttgcag	420
actcggaaat	tggagcacta	tctaactctg	atcggccagt	gtttcctcct	tttgctgacc	480
cgcggtaacg	acggaggaag	atcattgctc	caaggatgac	taaaaggact	ccgagggcaa	540
cgccaattcc	aatcccagcc	ttcgcacctg	ttgtaaggct	gtttccactt	cggttgcttg	600
ttgggagagg	cgagtatatg	gtgacagttg	cttggggggt	gggatctcca	tctgtggacg	660
tgtctgacgt	agtgctgctg	gtgcctgtcg	atgtcgtata	tggcttcggt	gtgccggtaa	720
ttgttatagt	ggtgggtgga	gtaccggcaa	gtatctcaat	agtggttgtt	gagggtatgt	780
ggtttcagtg	gtggacgaag	actctccttg	tcggagtggt	gagtggtttc	ggtctcgact	840
cggctggtgt	ttcggcgcac	ggttgactga	acacgtgtca	gat		883
<210>	3064					
<211> <212>	994 DNA		•			
<213>	Aspergillus	s nidulans				
<400>	3064					
gcgcttttcg	actgggttgc	gctaacaacc	tcatcagcaa	tgggctcaag	gctgatagat	60
ttggtggtag	catcgggaaa	ggatttctgt	tcagaacacg	aattcggcgt	gaattgcagc	120
acgctcacat	tcaagcgaga	tggcgacgac	ggaatactaa	ccctaggtgt	tggtgtaatg	180
tcgccgggag	tcggtgtgtt	atcgttaaca	acaggacgga	caaaatgagg	ctctttcggc	240
ccaggagcgg	cacgcttgca	tgccttcaca	ggtgcagcaa	tctcagcctt	ttcagattca	300
ggatctggaa	gtgtcaaaga	ctgctgattc	tgaggctttc	ccagctttgg	ctcgcaacgc	360

tgtcggagcc tagcctctag aacatcttta cattcagtca gcttgcacaa aaatgtctta gacaaatgtg tttgttgtaa aagctggcag acaatatcaa tttcacgcct gtactcatcg 480 actgactcct catcctcggt atcagtagta gcttcaagaa cgtccaaatc actcgtcatt tgttgtttcg gatgtgagaa ccttcccaag tcaagtcttc tcttagcgac tgctagagtc 600 gacgattgag agatttctgg ttcgagggat tgcgtgaagt ccagtccttc taattcttgt 660 aacgctggac tcattgcagc cgcattctca gattccactg gactgtccaa gtcgacaagt 720 gtaccgacga ctctttgggg acgcgatgcg ggagtcgagt ccatgggagt tgccacagat 780 tcctgtgtgt ttggctctag cttctcccct gtcttcgctt gaccggtcgt gtttattgag 840 gctgttggtg gcgtctctct aggtgactcc gtgctcacca agcctgcacc cagatcgtga 900 ttagttgttc cgaatttatc ctccactttg tcctcaggag tcatggaaat tgtcagctgg 960 994 gttgtgactt tctgctcttt gggctttaca atgt <210> 3065 <211> 1528 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> gacttttggg ggaattcctg gtcaataatt ccaaccattt tttgaagcat agtttcattc 60 cctccttggc catcagcagt tatcatcttg ccattaaatt ccataacgca aggaaccccc 120 ccagagcaca ttctttaaca tgggccagga aactcatttc tagataccct tttttagcag 180 agttctcctg actcaaatgc tttggtagag catttttcca caataacatg agctgagaga gatggatett gacaaageta gggeecaatg geateageee teegateagg atceatgeea 300 cctgaatttg cgtgctggca gcacgcagtt cggcgctgct gcttgttttc agaaggtcgg 360 tagcttgagt gaacacacga gagtagatat caacagaacc ataaagtggc tgcaaccgag 420 atgtacttaa catcgccgac aagccattag catagccgac acaacgccgc ggagactgtc 480

gtggggtaga tagctgccca acctcgcggt tgagactatt cagacagata gtgacgcatg 540

600

acaatagctg gactggacag gcaaggacaa agatacggag acagtgtgca gcgtgaatct

gcacagtata gctagggtga gaaagaactt gaagcagagc atcacggcaa ctttcggcaa

gtgaaccaaa ggcggagccg agtgaagaaa ctagagagga caaggcattg agggcattga 720 tcagagtgta cttgctaggc tcacggcgtt cctgaacaac ttggggatag tccttgagca categittat aagecactig getgeegtaa ggegaetgit eteaeggage gagtegegae 840 cgacggtttc ctcgagaata cttccaacaa ctttcctcgt cataagcagt cggaaccggt 900 tgtttgttat tgttgggtgg ttcagaagat cgaacagtag gtgatttgcg atctggtcat 960 accgctcttc cacaagcttc tcgcccaaaa tccgtagaac gtactttgta caaacccgcg 1020 atccccgctt gagctcggta gaaaagtgtg cttcaaagta ttggtgcgat aggtgcttca 1080 agagacaggg aggtaaaaag tttaaccgng cttcactttt ttggagcgag ggatttggaa 1140 tttaacctaa tcttattctt tcgggcttgg gcaaggcttt ttgatgcctt ttgcttttgg 1200 gctcgagggg cataattgaa aacttacatg tnttttctag gccccacgaa aagccccaac 1260 gcttttaaca gcccaagggt ataagacttt ctacacgttt agggatcaat ctcttttatc 1320 aaaaaggttt gggaatttga accgtgtgac ccccaaggct ttaccggggg tgcgccgtta 1380 aaattggtgc caattggacc acccaacctg gaaaaaaaaca cttaaccggg gttcgtttaa 1440 taaattcaac ccgggagaat cctcccaaaa aaaagagggg atgtgtattt tttttttctt 1500 1528 ccccggttgt aaaatccttt tggggggg

<210> 3066 <211> 2239 <212> DNA

<213> Aspergillus nidulans

<400> 3066

aatgttcaat aggaatgatt cttatcaagc gattttaaca gcctggctag gtacatcttc 60
tgctatgtag aataacagca tcaaacccta ggtagccagc ggtgcttcca cagtctacga 120
accagagaag cacagaagag aaggtattac agtatttctt tgaagatcaa catatggttg 180
acgcagtact ggactagtac ctgcaaggat atacgtatac acccctaaac aaacccgctt 240
tgcctcactg cgctcccgca ctgcatgatt gctagccttt tataggtagc cttgcgcaaa 300
tttttattat cgtccggaga caaaggaata tcgcgctaat aattccaaaa gccctaatcc 360
caacactaac ccgatacctg cattttacac tcgtgctggg gacaatagac ggcggcggcg 420
catcgcaact agagttacct gcacccttct cgttgaggat aaaatcaacc aaaccaccag 480

tragagtree catttgttte tragaggree targatrgaa catgtregtag etetregtgge ggaaagtggg gacattaagt ggttttagag ggtgatctct ttacttcatt gtaccgtgga 600 caaagagaga acgtgcagat aaatctaggg gatgagatgt aatcacctct taataccaga 660 tgcttctatg ctaacttggg caaaataatg tgttcctggt atgtttggtg atagtggagc 720 agagacatat gttagaataa tcgggcgaca tttcgtggaa atgacaatca accttgttag 780 aataattatc agtacccatg gtacatattc tgtcagcaac tgagaactga agtatataat 840 gcaggaacga aggcatggat ctgtatttat caccccgtta agtgatacta tcggctgcgc 900 tgctcagctt cagaatggta gcaatcaaac tcgaaccggt gttccttagt tggagaatga 960 gtatagtacc agetetacac gtgageteac gaageggaag eetgaataca gagtgettgg 1020 gatatatacc agcaaagggt ggtaaactca gccctaccaa tcctggtaat agtctcaggg 1080 tcaaccagcc taatacacaa tataccttaa tatcttgacg agatgttgag aagcttcaaa 1140 gcagatatgc aatgctcaca ggaactgaat aggtttcgcc atgacatctt tctgactggc 1200 agacgcggag tcgtttacta tgtgcgggac atgaaatacg cctctaataa gattgagata 1260 tatecetegt ceaatggtee aegaggttga agteteaace eteaageace gttteeggta 1320 cctagatgat cttgaaaaga gagcccattg ttcgaaatct cagcgacaaa tccgagtcgg 1380 tttggagcaa ccacttagaa tatccacatc tttgagtccc tctttatatt aggcctctct 1440 atttggtaaa ttgtcttagc agaagggctt aatctcagcg atgttaatga tgttgggtag 1500 ateggtgtag etgaaagttg tgtacaggat tagataatag tggegeagtt getgateatg 1560 tgcaggette etggatattg ggetgaagga tgagttgage eteggatege aaagetgtge 1620 aaaggtgttt aaagagtctt gttagcatgt aaagtagact tagggcagtc aaggtgatgc 1680 gccctgggta ggatctggag cattgctgat gagacccaag cccggggagc cttcgcttgt 1740 agtccactct cggtaatcta actgacaata gctactcacg cagggttggc cgccaacata 1800 tataaactgg ttaagagctc tacaaggata ctacgctggc cgggcaaacg ctggggctaa 1860 acggctagca gcagattaca ccagattaca ccatcttact caccaaagac tgtctgagcc 1920 tatgccaaag cacctggage gtgcccgtga aaatagttat acgatatcat ttgttcaatt 1980 ggggctctgc tgtgtcttaa gcgactaccc cgatttttgg gcatctctga cgcaatacaa 2040 ccctgctaaa cttcaaaacg ctctctgaaa aaataacagc cctgcttcta gaaagtaaga 2100

aaagggaaac	gtggggttaa	gatttaccca	ttacgtatta	tgaattcagc	agtgtcagga	216
aggtttggtg	agctcgaagc	tccttgcgca	cataaataat	catcacggtg	gacagcagcc	222
atcacggcaa	ctatagacg		· .			223
<210> <211> <212> <213>	3067 575 DNA Aspergillus	s nidulans		:	1.	
<400>	3067					
aaaatattct	cgaggtagtc	gccgtttcct	agaagatcg <u>a</u>	gccgtttgcg	ttgtgcggca	6
aaggctttcg	gcagatcttg	cgccaggaga	ctccgtagag	ccgctgagat	ggttctccac	12
acatcaaggt	ggacggggaa	tggcgcggta	tgtatagata	ggagggcatc	gttccaatgt	18
ttttggagtc	gggcttcgag	ttcgttttct	gggcgcggga	gagagctgtc	ccctcaagc	24
tgagggtcgg	ctaagacgag	gaggcggaag	atcgctggct	ctatgcctgg	cgttgagcgt	300
ggtgtgagga	tgtgttctga	gggtgatgaa	tgaatgcgct	gggacgctgt	gaggcattgt	360
agctgttcag	agggagagga	tatgcgcagc	cagagaagac	ggggtagagg	tacagataga	420
cggtagcggt	aacggctagt	gggaggaggc	tgaggagaag	ccgaaggagg	atccaacgaa	480
gggacatgga	ggcgacatga	tgtagaagaa	taatgatatc	tattataata	gcaggtgcaa	540
tgttcgaccg	ctgcagaatg	tacagggaag	aagat			57
<210> <211> <212> <213>	3068 579 DNA Aspergillus	s nidulans			·	
<400>	3068					
taattatgtt	cttcttttgt	aaagtttgcg	tgaacagacg	gttttctgta	atacatcgga	60
aataaaagtt	ggacacgaga	tgtaatcgag	tatttttcta	ctgatctgac	tgtttcggta	120
attatatatt	taggtttata	cattcaagtt	tatacgtgca	agtttagagc	taattacgta	180
ggtggacgag	accgatatcg	ctggaatgag	gatgacccat	catttagagt	tgctcgactt	240
gaatcaccgt	ttatctgagc	tagaagctat	cagtgccatg	ttcactttct	tacgactcag	300
acatecaact	ccaagacttt	atccaaacca	tetaggtagg	ttacaactta	tattcgcatg	360

cgttgctatg ccatggtatg ttggcaggtg cctgaacggc acgcctttgc gaggcccagg ccgagatacc cgaatgcaat cacgagcatc gacggctagg caggcgaggc ccagtgcttg 480 ccgaccgaga cgggatccca tttctgatta actacatagc ggcaccgaag caacaacttg 540 579 gttatatgtt taccaaacag caaatgtgga cctgcaggc <210> 3069 4386 <211> <212> DNA <213> Aspergillus nidulans 3069 <400> gtctggagac aggttggcaa ccaagtccca gtcagctcaa tcacgttcac tctctaaatc 60 ttcccccttc aggcatgcct ttaacaaggt tccagagcct atgcatccac tttggccccc 120 ctcagggtta attcacgtgc ggaaccttag taacgaactc gatttaagaa acgacggcga 180 tcgccaagcc accgcaacgg acaacaggaa atcaaagacg ccagctgttc aagttattga 240 tgaagaaaat gtgctttcct tcttgaagtc ttcggatata ttgccggctt tacgaaaacc 300 atctaaacag gtaatcagtg gacgagtgct gcaggcaaaa gtaggcaaac ggctgatggg 360 420 gcgaggcgcg agctcggaca cagacgaggc tccgtcccct gatactttac attcagctgt ggccaggtta tacacatctc tgcccagttc aatgagcgcg tttgagcgtg gagattacga 480 ggcgcaactt tgggcgcata agtatgcgcc aagtaccgcg aagcaggttc tttgcgctac 600 caaagaagca cttatgctgc gcgattggct aaatcatctt gttgtgtcta gcgttgatgt gggtagttca tccagagata atgagaaagc caaacggaag caggagaaga agcgcaagag 660 acgaaagaga acagataaat tggatggttt cgtggtgttc agcgaagacg agtactcgtt 720 gggtgaaatc tccggttctg atgatgaatt agctggcgat gtgacggtct cgaacaagcg 780 cactgtcata cgaaccgggg atctcacttt caacctgaag tctagcagtg accgcagtcg 840 tatagccaac gcaattette taagtggtee gtegggatge ggtaaaaceg cateagtata 900 cgcagtggct aaagagatgg atttcgaagt ctttgaaatc aatgcaggct ccagacgcag 960 tgcgaaggat attttagatc ggattggtga catgacgcaa aaccaccttg tgcacaactt 1020 gcatgacaag gaaaatgtca atcaaccttt cgggacatct tcgcaggctg aagagctgga 1080 agacgcgaag caaaaccaat tgactggatt ctttatgcct gctaagaaag ctggcagacc 1140

acagccaaag geteetteaa aagaaaacgt catgaagcat teeegaacte agaaacagte 1200 tttgatactt ctagaagaag cagacatctt gtttgaggaa gacaagcagt tctggtccgg 1260 ggtccttact ttgatcaatc aatcgaagcg cccgattgtt ataacttgca atgatgagag 1320 cettateceg ettgatgata tateetteea tgetatteta eggtataggg eteetteaca 1380 ggggttggcg gtcgactacc ttcttctgat ggctgcaagc gaaggtcata tactgcagcg 1440 gacagcagtt gagaggcttt attcgagcac ccgcaacgat cttcgaaagt ctatcatgga 1500 actgaattat tggtgccaga tggccgttgg cagcgagaaa tccggccttg attggatgat 1560 tgaccggtgg ccacaaggtg tagaccttga ctcgaacgga gacaagcttc gaatgctgag 1620 cgcggataca tacgataact acatgggctg gtttagccga gacattatga tcagtcccgg 1680 cttagcaaca gagagcgagc ttcgggagga agcattgcac tggtggcatt tgagtctaca 1740 agaggccgat gtcatggagg attcacagct tcaatcattc cgagagccca aaacgagtct 1800 ttcgaaaatt gagcacatcg aaagtctgtg ctcgcagtct gaatatatgg aatcgcgaag 1860 tgtcctcgat ctgcttgctg cgccatgctc cctggatgca cggatggtaa ttttatttcc 1920 cattlettet tecettitt eccgataggt etaactgtee caggatgeaa tegatacate 1980 cataccaccg atctcggaaa aacagaagct gaatttcgtt gacggttata aactactaca 2040 tgctgacaaa ctccctgatt acgctacctt gacgttggat attgggagta cgtttcagac 2100 tcttctggga agagtattcc gcggaacttg tgaagccgat tccaaagaca tgctagccag 2160 caacatgttg gaagctgttt ccaagcccaa ggcagctgag cctgccaaag agcttctaga 2220 agtgctcgta ccgatagcga agcctgattg tggatatccg ccgcccagtg gaggcgcaga 2280 gcttgcgttt gagtatggcc aacaatcaat tgtcgaagat ctcgcgccat atgttcgctc 2340 aatagtagcg tttgaccttc gtctcgagaa ttaccgtagg gagcttagcg gccttctctc 2400 cggcgatgcg aaaggtacaa aacgaatgcg aaccactcgt gctagtcgag cagcactcga 2460 aggeggeagt aaageggaga eteggaaaga gagatggtte tegeeggetg tgaatgttea 2520 acgcatttta gccacgggca acagagaatg gcaggatctg ctggttcaga acggctattt 2580 taccgtgcct gtggcgttgg agcaggcgac tatggagcgt agtgagctgc cttcaggaag 2640 tgcaagcgat ggatctatat aggatagccg tttatagaca gtctagtcac ccatacaaca 2700 atgaaagcta gagctatacc ccagagaacg tcggttggag atgccaagcc ttgggttgac 2760

tagceteege ggteageeae aacategaea teateeeete aagaetteet tgteaeeett 2820 cccttatcaa caccgggaaa gcaggttctc tttcccaggc catctatacc ttatacttct 2880 gttactatca atcattatat attctaatca aactactatc agctgtcctg caactcggcc 2940 ctgtctgcgc atcctgctgc ctgtgcctta tcgcgtccga ccgagctccg ttcctcgcat 3000 cgctcctcca ccgtgcggcg catcgctcat tccccatgtc attatttggg acgtcgccag 3060 atgactcccc ggcagccgat tcagctcgga gatccaaaac ttctttattt gccgacgagc 3120 cttcgttcgg caccggcagc agctaatttt ggcgggtcct ctctcttcgc agatgacgat 3180 gatttaggtt caccgtggaa tagtaacact gccaaacgaa catccaaaca acaattggtc 3240 aaaactttgt tgccaggact cggatgtacc tgaaagctat atcgatgcgt acgacctcgt 3300 actgagtgcg ggggaaagag cgggcacggg cgttagccta acgactgttc gagagctatt 3360 gtctggcggc ggactttcgg caacggatca ggccaagatc ctcaaccttg ttctctccgg 3420 tgatactgat aggtccaacg ggctgagtcg tggagagttc aatgttctac tagctttgat 3480 agggettgeg caggaaggtg aagaettaac tttegacace gtagaegate geegeaagag 3540 tatgtccttt gcgtccgaag actacattga aactaacagg cttgcagagc ttcctgtacc 3600 aaatagetee tatttggatg egetgegege gaageaagag tetateatge eeeettegea 3660 tgagcgtcct tccactcctc ctgcgccccc aattcccgta caagaaccga gccccgcgca 3720 ategeggegt getagaggag attecatggg tggcetagat geagacecat ggggtagtee 3780 geagetacat egtggeeatg etcacaetea gegegaagee gagegeggea tgetgaatgg 3840 gtatggcagc gttcgatcag caacaaacgc ctggtccaag actggtgact cggtaaatcc 3900 agatgcaccc tctaattcga gctacacaaa tggccggtct gagattcgca gttccaatag 3960 cgccgattac gggtggggtg accattttgc gcaatcatca cagggcggga gcctcggagg 4020 gccagttcag cctggtctcg gagattttgg acggcaggga tcggtcgggg cgagcctaat 4080 cccagtcgac agtcactgaa cattgaccgg gccataaaca accatgtcaa acaagtggtg 4140 acagtaacac ttctcccaca gaagaagggg ttgttcatgt ttcagcatcg caattacgag 4200 gttaaatcgg cccgtcgcgg gagcacagtt gttccacgtt atagtgattt tgtctggctt 4260 tttgattgcc ctcacaaacg atacccattc ccccaactac ctctacttcc accgaaacga 4320 caagcaggta agtcgcaaga aagcatgttc aagctctcct ctccgcgtct cactataaaa 4380

4386 gcatgc <210> 3070 <211> 1773 <212> DNA <213> Aspergillus nidulans <400> 3070 gataccettg aagtgaagaa cagaaacaag aaagacactt tetteeatat accgagggtt 60 tgggtataag cgaagacgcc aatcaaaaca agtgaaaaaa gccccctttt gcaatacaat cgtgtcatca acggcatcaa gataaaaaca catgtagaat ggatatatca ttcacaaggc 180 aataagtggt cgttagaaac atattacgcc gcgaacagtc ccctacaggg gtagtcacta agcatggcgg agccggctca gtcagatgag ttcaccgttg caccgtattt gtggtgcccg 300 360 tctcaactga tgattgtgta acactagaac cagacgtagt cgatgcgttc acactcgacg atgccacttg tgccctgagg gtggctacct ccgacttgag tccatttagt tcctcatgaa 420 ctgagcgaat gtactcccag agcttttcct cccgttcccg ttgctgatcg aagacgctcg 480 gategtgaga ggtatggaeg ttatgegttg atgetgette ggggattgte ttggaagtea 600 aagaaccacc gtgattactc gagtggctat gtgatggcgt atgtttagcg gcggaaccgg aagcctgtac ggagctttgc gagtggaggg aaaaacgagg ctcagaagac cccaagccag 660 gtggcggcgg aagttgaggg gccccgggct gaggtggtgg aaggcctaag ctcggtgcag 720 tgtggttgga aagagaagcc tgagaggggc ctgtacgatt gtatgattgt tgagggaatg 780 gatgtgagat tccagcagag tgggcgcgat ggtgcatttg tagaccgttt tccggcccgt 840 gtcctaattg gtgggaagat agtgcgttcg gtgagagcgg ttcttggact ttcagccatg tttgaaggcg caaaagcaga ggagccagat ggctggtttg tcgaggggaa cgccatattg 960 ccggactgag atactgggag aaggggaggc actagaaccg ccatgacttg taggaggagg 1020 gaaaagcccg ccaggcgacg gtctgctcgc ggcaattgga gggtaagtgc taggttgacg 1080 cgcttgatag ctgcttacgc tgattgagcg aacggcataa ttcgagggca catcatgctt 1140 ctttatgctc ggcatgttgt aacgtcgttc atcatcttca tccatgcatt ccggttcggc 1200 gtaaactacc ccatccatag cctctttggc accagcagct gctgcatcac catactcatc 1260 ttagggtgcg taacttacca tgctggccct acgaccagca caggcacctt ggcccttatt 1320

atgactcgca agggcctcac cgtatgcaaa cctgtgttcg tactttggac atatatggtg 1380 gtcgtcacct atatgaattt cttggatact ttttttagca tactcaatcc tctgaaagct 1440 ttacttacag tgttgagtct tacataccgc tttcttatct tctataatgc ggttattttc 1500 tttgatgtgc tttatttaat tttttatata gctgttcttt ttttccttta ttgttctaaa 1560 ctcttgttgt gtataaaata atgtatgatt gtgatatctt tatttaata ttatatatt 1620 tttttttat tttgtgttat ttccactccc ctcccctatc gttaaatctt tattatcatt 1680 ttctttttct ttttttagaa ttcttttatg ctataggatt ttgttattt tattatgtat 1740 tttatttta tttattata ttattatat ttt

<210> 3071 <211> 1324 <212> DNA

<213> Aspergillus nidulans

<400> 3071

60 ccctttcagg ggcgggagct tcggtggtgg attgccgcct gtccgcctaa ggcagtgtat 120 tttaggccag cgctctgggc tccggagatt ctgcttagtg ttgtccgctt cagtggtctg 180 cgttgtcagg ttatgatata gtcatgcatc ttgagccaga gaacttagat actgcctctc 240 tategeegee ttgggettag cateacetga egteetggaa aagteaacea gggetgaaga tacctcaaac tagggtacgt atgatctaag acaggagata aaacgatata tttggattgg 360 tactgaatcc tattttatac caaccgggaa aaaaacaatg tatgaaatgg agaagacact 420 ccaatccatc cagtgggtgt ggacaatcat accaaggaga agaaagtctg gaatttgtcg 480 aatttcgagt cttcaattcc aaacacagtt tgtaatgaga acagaaagga gagcaagagc 540 cctcggaatt gcatcaccat accaagacaa accaaatctg tttatattga tttgagtggg 600 caagaaagca actttgcgtg ttgctttgcg taaagaaaag aaagtagaaa atctcaaaag 660 ctagacatga aggaaaacag aaaatgacaa tcatcccaat aacagtaatg ggtccgttac 720 gtttcggtca tattatgtat acgaggttcg catcacacaa tcggagtctt gcgcttttcg 780 gegetegaca geacaageat aggagtettg egeetateeg taccetggge taccegtette 840 900 tgaccagcga cgacagcagc aatggatggc gatccattct cgggtgaagg gtgttctgcg

aacttgcctg caaaataccc gtctttctcg ttgagggagt ttgtgctaaa cggactgtcc 960 ggcgacttgc gctcccggga ggatttctcc ttcctctcag agccaatggc accgttggca 1020 acagcgcgca gactgcctag actgggtttg ctcgaaaggc tagcactgcg aaccgtggca 1080 tcgtcattat cggagaaggt gaattctttc tcgcttgcag gagtgttggg tgcccccgct 1140 gctgtgtcct aggcttcgag aatctccgcg gcgctcgata cctgcacgca ccaagttatg 1200 gacggcacgg cgacgctgac gggtggcaaa atttttgctt ccttcgagcc ttgaggttgg 1260 tttagcaact agttcctaa gcgacggcg ggcccagttt gaacgacggg tgcttccac 1320 acga

<210> 3072 <211> 782 <212> DNA <213> Aspergillus nidulans

<400> 3072

cagaccctgc tgccaacaag aagaaggtca agaaggacgt cagcccgaaa attgggaagc gaaacgacat cggaaactca ggaagaagag gaggaagagt tgagcagcgg agacgaggat tttgcagagt ctcaagatgg tgacggaggg tcagaagcca gcgagcttga cgacgctgaa actcataaga aagatatcga ggcccttaaa gagaaggacc cggaattcta caaatatctc caggagaacg atgccgagct gctcgaattc ggtgaccttg cagaggttga cgcgctgagc gaaggagagg acgagcagga cgaggagccg gctaagaaga agaaaaaggc agcaaaggag 360 gaggaaccgg cttctaacct aacggttgca tcggtgcaga aatggcagaa gctcatggaa 420 gaacagcact ctattcgcgc aatgcgacag gcagtgctcg ccttccgtgc cgcggcgtat 480 ctcgacgacc cagatgccca ggagcaaaag tactccatct ctgactcaaa cgtgtaccac caagteettg teaeggeact taacaatgtt ceeaaggtte tttegeatea tetteetgte 600 aaggagaccg cgtctggcaa agttcgggtt tcactagact caaagaagtt caagactctc 660 accecetta teaagtegea caceteetet gteeagaaga ageetgegea eeteteegae 720 gagcaaaccc tcataatgaa atctcttcga tcgaacccat gcttccctac ctcctgggat 780 782 tc

<210> 3073

<211> 1799 <212> DNA <213> Aspergillus nidulans <400> 3073

gatctcgaag ggtccgagtc ctgcaatgga atttgatggt cgagctatat cagatctgag atgtgtaaca gattaacgac cgttaacatt caagactatt gcaagccatc cgttgatccg gcggcgtcag aagcacactg tagtcagtca agtagtgact gcagcggcca cagtgataat 180 gtaagatgag tctgagtcta tttttagtct tctcgagcgt agtcatgaag acagctcgag 240 tcagactatg cggtccggga cgaggacgag catacttctg aatacgatcg cccgtaagag 300 tecteaaaat ettgeeaegg cattgageaa teageegtte gtgeaaeage gteeetgaag 360 cagatgtggt ttactgcttc gacagaggtg gtccagatct cggctccaga gcttgtaagg 420 tctgataacg gcagtttaag agggctgtat acatgctaca cggcagtgct catgccatat 480 cgagtaaggg aaggcaaatt gtggatacac ggatcggagg attcacaagg atcgaatagc 540 tgggtgagca gatgacccac tgtcggtgga tatagacagg gccgcaaggc atgaaggaaa gcctggacag gggccaccac gaagagcggg agcgtcattg ggcaaaggta agcgctcaac 660 acaaagctga aacaaggggc aaatacttca cgactgtttc tggcgccagt ttgatgatgt 720 ttgctctgcc ttggcatgct cggctccacc agagctcgac tcctgactcg cactcacatt 780 cttggcactc ggcttgggta acctgacttc caggctgaca actgacatag acagcacgga gtggtagcag ttgtactact ccttggtccc gggtggccct cactacccga acttggacaa 900 atctctagta atatttctgt gctctggaaa agtatctgtc taggtgttga ggatgcaatc 960 gccctcccag cttgagcaga gcttgccatt gagttacaag agtatatggc ctctccagtt 1020 ggtgggccgg gcgcgggcct gaggggatgc tcttaagggg taggtgcggt tgtcgatccg 1080 geggtettee agtacegeat taegateeet aaeggteatg atgattattg ttateatggt 1140 ctggcgaatt ctcaagtctt ccaatatggc atgtaatttc cgcaagacct gtgattagac 1200 ctcgtttatg tgcttccaga ttatattttc gcgctcttaa tattgggtgc tctattttgt 1260 tettteeaaa attegetttt taeagtggee ettgegaett gaaegettaa agaetegaag 1320 gttcgtgggt agcctaaccc aaaaaggagg agcatccgac agtaactcag aaactcagtg 1440

tgctagactg taagcttgct cagtcaacag atctgctcac tactctcaaa tcagaaagga 1500 cttcagtcgc tgtctcttcg atggatccgg gacgaggccc cactacctct gtgatccgtt 1560 gacgtatgtg acaaagcctt acgcgagtat cttactatag cagccaaatc ccagtatttt 1620 tggaaaggac ctggtatagt catgtatcgg tccctagcgc tgtctccgct tttccttgct 1680 ccagagtctg gtctctagcc tgacgcaggc caggacggcc tctttttgcg ctgtcggtgc 1740 gcctttggta gccagcctct gcagtagtgg gcaggtgacc gggccagtca gaaagagag 1799

- <210> 3074 <211> 1190
- <212> DNA
- <213> Aspergillus nidulans
- <400> 3074

ggatgccctt gactacttgt tggactatcc tatcgcgcca tcacgaataa ctattttcat 60 gacaattgcc gaggacagcg cgtggggcaa catatttcga gcacagggga ttaatgtgtt 120 tgttcttgaa gatcgacagg caaccacgca gaatcgcgat gcagctatga cagcagcgac cgattatgat attttgaggt ggagaacgga ggaagaggcc agggaatttt atggagagtt gtaccagcct ggacgcgtaa ctaatacaga gaggaattgg agaaggagaa aggggctttc ctgatggctt atgtataatt aacgcaaacc agcattccgc aggtatgcag ccaaatatat 360 gtctagaccc tcagtgaaga cccaagtttg ccgtcattcc agttcagccg gagactggag 420 cagatttgta ttgcattctg gctctatttc gcaaaatgtc ctttacctac acattctaat 480 gaaaactaac actgggaagg caaattettt etcaaegtae taettaetta agtagtgetg 540 gaggaattaa gttgcctgct gcagaaatac actcgtcgct ttgtgaacca aattatatcg 600 acatttcgtc agctccgcaa gataaaggtg atgcgaatcg tccatgctag tactgtgatg 660 agcagaaatg cccgggtttg tgacttgccg tggccgaact aagacacaga actcagctta 720 tgaccggata catagtcatg ctatgcccat cacaaagctg acttccatcc ccctctgcc 780 tcaaaaaccg cccctacagc ctctgccacg gaaagaagat gctcgtcatg aaacctggcc gccacaagtg acaacccaat tggcatgccg ttggttcctt gaaatccggg gatattcacg acgggggtgt ggagcgcctt gtcaccaaca aacgttagcc agtctcgtag tctqqaqqct 960 tagcagtggg tacgtaccgt ccacatccca ttaaacgctg cactgcccgt cctcaqaqtc 1020

ccctcaggcg cttcatcggg tacgctgggt gtcagcagcg cagagtagcg atttgcgatg 1080
tcatcaataa ccggtctaag cgtccccacg ccatcaaaag cagcgatttc ttgcgcatgt 1140
gtccacccgt tgatattctc aacctggtta ccaagaaggg ctgggctttt 1190

<210> 3075 <211> 2146 <212> DNA

<213> Aspergillus nidulans

<400> 3075

60 agataaaaag aacgaatgaa ggagaaggaa aggaagtagc aaaaaggtag aatgggaacc aagtgcaaag gaggatgtta acaaaagaaa ttaggaggag gaagaggatc tatattttag gtgaccaccc gatatcagta cgggacagaa agagatggtc ttatacttgg tattaagggc 180 tccgaggtta cctagaaaga agggtacgag aggcagtcca tgcggatagg ttgccacatc taaggaaatc cacaaaaaaa ccgagattca tggccaaaca gacaagccag gtggggaccc 300 caggtacagt gtctcagccc caagaatcta ggaaacgagc cagagcatag tgttcatatc aaattcaacc gtgtggaagt ccggacgaaa agcctattat gtgttgagga cggcgagtta ggggatgcct aatgtatgaa agtgggtttt cgaaaacgag agggcagtgg gtatctggcg 480 aaaacgagga tgttgttcaa aattagaaat gttatccaca cgggctatag caagtaagaa 540 tagtaagagc tgcgcggtat gtgagatgag agttgggtgg tttatgcctt tggaagtcac 600 660 acatggcaca acagtccaca atgctatgag ccaacatgac tctatctgac acggacgaaa agtggtatga agactgtggt atagtactct gtattaaatg gcagttctgg atctgcacta 720 780 tatcaaatct ggcctcccag tgctcttatt ccgtcagtgc ctcaggttct tatgctactc aggatattic tecageatee etggeagget taegegtgtg etegagaeta ggtteeagae 840 attttggaca ccattaccaa taatcttgca atctttgtaa caatagtacc cacagggcta 900 gacagccttt ttaaatcccg taatattgat gtttgacgag cagctagcac gatcttcaga gagectgtag ttttgaccag aacgagaaag ctatgccttg gctaataacc agagcgattc 1020 aagtgattta agctggtacc cgcaaatctg agttctccga taagatcatc tcctgatcta 1080 gaatatatcc aagcagaaaa ttgtagctgg atccaagcta gttacttggt agtatgtcct 1140 cccaatgatg ctatatgcaa agccctagac cccagtcgcc agctgctctc caactttaca 1200

agcccttgct catccagtca atcaacttgg tcgaactgct cacacaagct atgaatggtc 1260 ttagtgaggt acacatatet aaattgttta tetegtagaa eageagegtg ageeetaaet 1320 ccgacagttg cctgcgatct tttgagtcct actttttgcc cggatcgtgt tttagtaggg 1380 tataacgaat tgacatctta tagctgtgtt ggaactttaa ggcaaacatc ttaagctttg 1440 caatgtcctg ctttctctag tgcccttgca aatgtccttt tctgagttcg tcttatcaat 1500 ccgtatcgcc gcagacttcg ccttcggaac aggtatagtc aacgtaatcg ctgggctcat 1560 actcaccaaa tgaacgaccg tcgtcactgt cggatagcta gactcgctgc cactgataca 1620 aagactgccg tcattagacg ctctcttatt attatgctcg atctccctgc aatcaaagat 1680 tttcactggg gttggcgtcc gactcccgag aaactgttga ctgcttgtgt ccagtaggcg 1740 ttgacgcctg gttattgaag acgatacaca atgataaagt ttgtactgcc taagactaac 1800 ccaattcaaa agcccaatcg atccctggga gagagtgact aggaagaagt gggcggcctt 1860 ttttaaaget acaccaaaag etegeteaat etteeegaga agtgegatge tetggaatgg 1920 acaacccaga aatggaagac ataggtagga tagttgggta gaatgcgggg tttgggattg 1980 agttagatga ttggcagtcc cggcagtttg ctcaaccaga ctatctgaca atagggggag 2040 cgaaagcgct ttgaaccaaa taaaagtaaa acggtcaaag gaagagacat cacaaaaggg 2100 gattagacaa cacagtttac agagagttgg aacttgcccg gatcgt 2146

<210> 3076 <211> 736 <212> DNA

<213> Aspergillus nidulans

<400> 3076

accttttgac ggacccaaag ctgaatgtca tttttgacct ctatttcagt atgctgcaat 60 ggtgggctct cgtactgccg catgtgctaa tgtacgtcag tgtacacata ttccagcaga 120 cttgaagttg gctcgccccg gttcagcaca cctggaagtt tcttcattta tgtgctgttc 180 gtggcgctga ttattatggt aagtcctgat tatcttgatt tccctgatag aatatatcta 240 ccacataaat ttacacttct ctccctctca tggtgcttca tcggcccca ctccatcttc 300 cataccctgc aaacctcgca tatctgcccg cccagccca ttctagctga agcggttcct 360 ggaaacgagg aagattaccc ctgcatcgca tatggtacct acttcttgat ccttataggg 420

ccatgtacgt	gtaggcttgg	tgggactacc	agtgagatag	cctgcgtaat	gaatgtttac	480
gcaggtggtt	ttggtgccct	acattttata	atcttgtgca	taacatttac	ctgacttcac	540
gtaatatatg	tactctcttc	attcatgaaa	agccatcagt	gtaccccaat	tcatgctaac	600
gacctgaagc	taactgcagg	gttctatctt	ggagccgggg	ttttcacaaa	tggtgagctt	660
agtacgtgat	tcctgatcat	aaggagctaa	tccccagcag	cgctgatatc	ggcactcgaa	720
tacacatatt	cccagg					736
<210> <211> <212> <213>	3077 3559 DNA Aspergillus	s nidulans				
<400>			•			
tgagttccgt	gcgcatcatg	gtttgtccgt	tccatgacgc	cgtgttatcg	agtgttgtct	60
tgagaccctg	tgcctcatca	agcgtcgagt	tggggttctt	gtactcgaag	gagaggaaa	120
ggtagtgcgc	tgtttcctcg	gaaccgtgga	tgtaccattg	gtacgggggg	atttgtgagg	180
accaggaccc	tttgggatag	tcatattagc	tcagaagaga	gagagaaagc	acaggagaag	240
gtacggaggg	aaggtacatt	tgtcaaagtc	ggcgacggta	taactctcgt	tgaacaggcc	300
gctccagacg	gtagctgctg	aggcgagggg	tgtcaacgtt	gaaagcaggg	ggaggatcga	360
ggtggacttc	attttctgcg	actgatagat	tgactgcttg	gctttcttgg	tttgaggcga <sub>;</sub>	420
tttcaaggcg	aagatggggt	tttatagctg	gtgggaaata	tgtgtgtttc	accgtgtttc	480
atgtagatcg	ctccagctgt	ccgtctcctt	ctccttccgc	ggcggatcta	gcacggatcc	540
gtggcgggga	tgaggccggt	aggatgctga	tgattgacag	atgtttattg	taaattaagc	600
cttgtctact	tcgtacaaga	gttcttctga	gttgcttcat	cttattacat	atagagctta	660
tatactccac	gaatacaaat	ctgtcttcac	cgctacagga	ctatgactca	tagaacaagg	720
tagtacttgc	cttcacattc	taacacatag	ccatatcaga	attattgtca	gtgctcttgg	780
gcttcaattg	cttcctctaa	ttccattgcc	ataaggctct	atcgatctcc	tccgcccgcc	840
aggacctttt	tcttgtcaca	ggttcaattt	cagtgcagat	aaactaacaa	gtgggatttc	900
ctctactcaa	ctgccgggta	ttcactccgt	tgtttctacc	tccgcaagat	gaatccgtga	960
ttcgagacaa	gtcggaggtt	cctccgttgc	gggccgggga	ggcctgtgac	gatecteact	1020

aatccggaac ggcgtagagg cgttcatttt agcgtccata agcacaattc tgcaagattt 1080 aatgcaccca gcgctctttg agctctactc agtggtaagg ctggatcctg cagaaactgg 1140 agggatgttg gctggtagtg gtgacggtgc ggggaaaggc aaatgttcta gggctaagta 1200 aagcaggtga tctttgtacg gattatattt cctagccaaa tcaaacggcc aggttagatg 1260 aaaatacaag tataatatat acattgaaca gtcgtacggt cacacggtca aatcaatata 1320 actgactate etaacagega aageaataag atatteatta eteatgacet eggeattaae 1380 catatccatc cgccttatcg caacatactt agtccagcta ggctccgtcc taaccaagca 1440 geoectgeee titetteaga egiagaeact accaactete eggeeeaaac titeaceteeg 1500 tcacctgcac agecgtcccc geograteca tegtattege egeaatgtte gtcccccace 1560 aggatgggaa ctccgtgttg gtcaagttca aggtaaggaa aatcaagatg gtgcacaggg 1620 caaggccaca tctagaccgg cggaaagaac atagttgtat tgcatccacc agccgcgcca 1680 acggtcgcgg atccacttgt tgaagatgaa gccgataatg ccccaggaca gataattgag 1740 cggcgtggca ggagggataa agctagatcc accgaagatg atgggcgcat tgagaaggcg 1800 cacgtagcgg gcgtacttgg tgttccgaag aagcttggct gcgatgtaga tggcgacggg 1860 gagggcggca ccggcgagcc agaaccattg gagactagcg tagagttggc caggagagaa 1920 catgcgggcg gggccgatgg tgccccagat gatggaggcg ttgaagaaga cgcggccgtt 1980 gggacaggtg tagcggttcg gctgatcgag ggtgcagacg ctcgaaatgg cgccgagagc 2040 ccagttcatg acgcagatct ggacaatcga tgaccacagg caagatatca tctgtgctgc 2100 aaaggtcacc cgcggaggaa tcttcatgta gtggccgagc ttcatgtcct ggcagaagta 2160 aaggccctgg tacatgctga tgtacccata agttttgaag agcatcattg ccatcgggcg 2220 gccaggetgc atgtacccaa tcacaaactc ggtgataacg ttgagaccga tctgaatgtt 2280 ggtcgaggct tggataatac cgcaaggcac gaaccatact gcacccatga tcagggcaat 2340 gaagaaggcc caccagctga gattggtcgg gtagccgagt gtgacaccaa gagccattcc 2400 gatcataata agtgtgatag cgccgtacca ccataacgga acaggcttga atcgagccat 2460 gagccgtgca tggacatcct cgtcctcatg accgatctga cggaaccgca cccagatgtc 2520 ttttccgtgg aacaggatgg catggataag cacagcaatg atggtggcaa aggacagccc 2580 ataggcgaga gagaaggtgg ttgataggaa cagaggagag taagcttcgt acttggcctt 2640

gtccagggtc atctgcgggg taagaatacg cgtaacattg tagacttgac ccgtgttgtc 2700 gtagctattt gagtcgctga tgggcaggta cttggcccag tgagtgccag tgtagtgcag 2760 agccgtggtg acgacccaaa aaagatgaac atgcccagct tagtgttggc aattccgtgc 2820 cagggcgcga tgagcgggct aaagttgaat cccgaaatct gagtccagtc aaaagtcatg 2880 ggaatcagcg aaaggccggt ccagccgccg aacaactgat tgatgaccac gttgttcggc 2940 ttgatccaag tcacccaggc aaaaacgctc aggaatgggg caatgtatcc cggaaaccaa 3000 taccaaagaa aagatccaat cagacagtac agaaacatac ggtatctgcc aattgtccag 3060 ccagagactt tgcttgggtc gggccgactt cggtcatgga gcgcggtgaa aagcgcacta 3120 ttgatcagcg tcgacggcca gatcattgca gccggtgtaa ccaagaaccg gtggaagaag 3180 ccagccattc caaagcccag catctgggtc gagatgcaca tgaagatctc aaacgcccag 3240 tcaaagegtt gettgtagaa ggegegetgg gegageagaa categgtege gtaggeegea 3300 ccaccgccaa aggtggcatt ggccatgatg accgcaatgg catgctcctt cttactataa 3360 ggtccaggat ttaaattgac actcattcca aacatcctga ttgtcttatg gggcatgacc 3420 ttggcccacg caacgctcaa tggggtaggc gacgacctgg gcgacatacg atggaatgac 3480 gatgtacggc tggcgcatgg agaagagcat gttgagtgca gaccgactgt agctaagaac 3540 3559 atgcaatggc caggcgcgg

<210> 3078 <211> 1682

<212> DNA

<213> Aspergillus nidulans

<400> 3078

gggggaggag aggataattg agggggtte ttttecegat tgtteacteg tettggettg 60 gegettgagg teggggggtt cetacgtaat etaagaaaag geegeaatta gatgaacagg 120 cattttaage atceetgegg eggtactaga tacaataaat egaatggeat ttettettgt 180 tactattetg gtgaettaeg aagetttatt taceegetet tgeaactgea gteeggtaet 240 taeggegaeg eacetettga ggeeeatgee getggageet gggeacagtg eeetgetgaa 300 getegggeta tttetgeagt teeeceatgt tetegagaee tgeeagaatg eegeatggtt 360 acacatgeeg ttgaeateet acgtaecatt tteatetggt acetttaece ettgatgete 420

ttgacatccc ttaccgagtt ctttcacagt tacgccttca taactggacc tcaccagcct tgcaaggctg ccaagatcga cctcatttta ttggagatga acaaatttga cccgcttact gtgggcctgc ccagacgcta gactagattg ggcgttttgt catcacgggg ctcagctaat 600 cgggaaattg gacccgtccg gccaaggcgg ttccaaccag aggccggtaa acagtgattc 660 aaacataaga ggttcacaac cacaggttca ttatgcaacg ctctccctgc agtcaatctg 720 cataaatgtc agattagccc aagtagtaca atgagatgct ggttcagact acgattcgtc 780 aagacctcag aagctgagaa aacgaatgca ttccatgaag ataaaaggag atatatctcg 900 gctaatagaa caacatatag gcacctgcac gcgcaaagga atagcaaaca tcaaggcgaa catagaagaa aaagaaaaca aaacaaaaac aaagagaagg taaagacaaa aagtcaatac 960 cgaatacaga aaatccctca ttgcatgcgc ggagctacga tttccactgg agacgcagta 1020 atgettagte tecaagagge ateceeteca cetggteace cagtgacege cagttgteag 1080 cttgcagctc cgagtacttg actcgctctt gactccaatc ctgatgaagc cggctgatgt 1140 gatactggct ctgttggaag tagataagct cgtctcggat gcactctttg atgaacactc 1200 cacgcgcatg ctgttgtaca attgattctt tgtcctacag aatatgttag ccaaccaacc 1260 ttctgggcca cggggcaaat agtacgaacc ttgaaaatcg actcctcgac cttttcgatt 1320 teacetgget tgaeggtece etgtggtege getegtaggt ettggagett gegtteatte 1380 gcctcaattc gcctttctaa ctgggggatg ttgttacggg catatcggtc ccgtcggtca 1440 aacatctccc gcacactcac taggctgtct cgctgacgtt tcaaatcttc caacactccg 1500 tetteccaeg eccegegete gtettetage agaetttgae tggeggaeaa gtgtettgee 1560 gtggccttga tcccttcatt cagtagaggc acgtcgttcg tatctaacgc gtatctgtcc 1620 cgagtcattt ctgtgagggt agcagggcaa gcgaaaaacg cagatggtca cagcaaggcc 1680 1682 tt

<210> 3079 <211> 699 <212> DNA <213> Aspergillus nidulans

<400> 3079

ggagctgttc ggggcgacct gcgagtatgg ccaaggccag ccagctgaga cactacctgc 60

aaqatccaqq aqtaqatgat cctqcqaaqc atgacqqqqc ctaqaccatt gaacacttgt attgatatac taccatageg ceggcaceca agteacatte taacgeegac attgtatett qttacctaac tccagctctg cctacgtaaa aagaccatga ctcgcccaac ctcgaacctc ggcgattcaa tagtttccag cgccacaaat cctccctcga ggagaaggtt gtcgaagcga 300 gtcagagaat cgggttttgt atcctgaagg gaaggtttgg acgaacatag ctgctattat 360 tattcttctg tggccgacgg tggcagcgcc aatatcagac ttcgagagac cagatacgga 420 cccaggctgg gtcgcaaagc taccgtagct cgtttacggg ctagtcaaaa caatatcaat 480 gtttcatacc tcaaagatac ggaatatgag actcgttcaa tgattcgctt tgcgtagctg 540 ttgagcgcat ctcgggcgtg catccatagt caaacccaca gcactgttga ccaattggcc 600 tgaattacat ttcctgccca cttcacctaa agtttcagaa taaattctct caaagttata 660 699 ctttcgcagg atcagaatcc tgttcagctg cctgcgcta

- <210> 3080 <211> 1075
- <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 3080

tataccttct ggggttcgtt aatcgctaag atggtgaaac acaagggagg cttggttttt 60 cccgcggccg atgccattgt ttttccccaa gtttttcaac ccgccggctt gatcgcagat ttcctcaatg gcctgaccct ttggaagact ctggcgactc tgttcgcctt agctgtggtc 180 tacgaccagt gtacgtggcc tctggaagcg agtttttgcg agttactgat tttctcccag 240 teegatacat ttaceteaag ggegecateg ttggteeage ttggaagete eegtttatgg 300 gaccgttcct ccagtctgtc aaccccaaat tccacgagta caaggccaaa tgggacagcg 360 gcgagctgag ctgtgtgtct gttttccaca agtatgtgac caatacgatc tccttccaat 420 ccgcaatgtc tctaatatgt cgaccttttt agggttgttt gtcatcgcat tcacttgtga 480 tatggtccgc aagatettea actegnetae ttatgtcaag eeetgtgteg tegatgetge gcataaactg cttggcaaga ctaactgggt attcttggat ggcaaggaac atgttgactt 600 ccgcaagggc ttgaacaacc ttttcacccg tcaggcgctt tcttgctatc ttcctcgcat 660 ggaggaggtt tacaatgact actacgcgcg cttcctcaaa aagtctaaga acaacaacta

taagccaacg ccgtggatgc ccgaattccg tgacctgatg tgcgccgtct cttgccgtac 780 cttcgtaggc cactacattt ccgatgaggc cattgataag atttccgtcg actactacaa 840 catcaccgct gcgctggaat tggtcaactt cccgatcatc ctccctttca ccaagacctg 900 gtacggaaag aaggctgcgg acatggttct tgacgaattt gccaagtgtg ctgccaaaag 960 cagagctcgt atggctgcgg gcggagagat tagctgcatt atggacgctt ggatcaaggc 1020 tcagttggac tctgccaaat accgggaaaa gattgccaag ggtattgagg ttgac 1075

- <210> 3081
- <211> 1299
- <212> DNA
- <213> Aspergillus nidulans
- <400> 3081

aaatttatgg aacaagacac aaattcatga taattacatg tttccagtca gagtatcttc 60 tgttatcage cagaaccatg cegaccettt ttgcgcctat cetgtgccaa tgagcaacge catgtatata tatttttgcc attatacatc acctgcttaa ttctagcttt ctcatattca cagccgacac tgaaaatatt ctcagacaga ttctacatgg cctataaaaac atatccgctt aatattgagc agataaatac ctggtagact gaaagggcgg tcatgtcccc agggcaactc tacaccaaac tctgtctcgc ggctggacac aaggcggctc ttgaatcttg taatggtgtt tcatccatag caagccaaag atcactcaga gattgcttac aatttcgaac gaacgccgtc agaatcttga acgatcttct gcaggatccc gtgactgcgg tggcagagtc tacagtgtta 480 acccacaggt atctacactc tatcaccctg cttatgatcc gagaatttaa taacagcaaa 540 tcttttgtta ggcgatcctc gatgtaggaa ctggtacggg gatctgggcg atgtatgtga 600 ccattgccgt gcagcttgtg aggctaatat attatagaga tgtcgccgat gcgttcccag 660 ccgctagagt tactgggttg gatctttcgc ccattcaacc cacatttgtc cctccgacct 720 gctcgttcga aatagatgac gtaaccatgc catggacgta tgatacggaa caatttgact tgatctacgt ccgcgagatg ttcggctcga tacctgattg ggatgcgttt ctccggcaat gttgggcctc tctacgacca ggtggctaca tagaagttgt tgagcattcg attacgccca tatgggacgc tgataccagc ctgggaccta tctacgcatt atgggagcag acaatggcgc aggttgagca ggtatctggc aggagtttct cgatctggcg tgaaagcgca caggtgctgg 1020

<210> 3082 <211> 1330 <212> DNA

<213> Aspergillus nidulans

<400> 3082

60 gaccttccgt cgactgtatg acacagccgg tcttggtgac gcgactgaga ttctaacggg cttccatcgg cttgcgcttt acgagatgag caaagccgca gaggttgaaa gcgaagttgt 120 caaccagcta gtagggctgc gcaacgatct gcagaagaaa accaaagaga tcaaggcact ggccggggat tttcgcaact cggttgacaa agaagttgat gctactcgaa agacggtccg acatttgcaa gaagccttag gcctagtcga tactgatcca tcggctacgt ctggcaaggg 300 agateettte attgteegee teagegtega gaageaaata gagaageaaa ttgaggagga 360 aaactacctc catcgggtgc gtccactgtc cttggtatat ttcgttttct aatgtccata ctaggcctat ttgaaccttg agagctctgg tcgtgagctt gaatcaattg tggtaggcga aatccagaag gcttacaacg cctatgccgg tattatgaag cgggaggcag accacacgct 540 cgacacggta gacaagcttc gcgcgggccc aatctcaatg ccgcatgatc atgaatggaa 600 cgcatttgtc gcaaatacgg acgaaatggt ggacccgcgt atccgaatcc gtgacgttga aagcattacg tatcccggca aggatcatcc ggctgctgca gaagtcaggt cagggatgct 720 ggaacgcaag agcaagtatc tgaagagcta tgctcctgga tggttcgtct gcttacccgt 780 tggactgctc gatgtgctaa tcctgctgca ggtatgtttt gtcaccgact cacctccatg 840 agtttaagtc ggcggatagg gttgcatggc agacaccagt aatgtcatta taccttccag 900 aacagaaact tggatcgcat tcgcaaccgg actcgacatc gcacaagttc atgctgaaag gacggcaaac gggaacgatg cacgagggtc actcctgggt atttagagcg gagtcccaca 1020 aaagaatgat aacctggtac gaggatattg atggaatgat catatgacag gagaggcacg 1080

atatgcgtac gtcaggcgac atgtacgtac cgtcagtggt gccagtttcc gaagcagcag 1140
tgacggagta ttgaatgaag acgaagccga tcggacccca tactctgctg gatcagttgt 1200
gatgcaacag gaacgtccta catctcagcg ccaaccaggt ggcatgttac accagccctg 1260
tacaaatcga tcgtcaccaa cacgatccac tgtctccatc aagcggagag agctcggaga 1320
gagagatctg 1330

<210> 3083 <211> 3542 <212> DNA

<213> Aspergillus nidulans

<400> 3083

60 cettlegtte ateteatgag cetgggatte caateateet tatattteet aacggettte tggttgggtg cggtgtggcc tgtctcctac tactcccctc ggttacaatc attcttttc 120 atcctcttcg gaaaaaatct gatttgccat tgatcaatcc cggaaagggg cgcatcggta tactacgagg gtatcgctca cggaagacat ttaccacaga gctaccgaga ttagttgcag atgggctttc caaggtactc atctatcctc caaatagtag taaccgctga gcccatagat 300 aggegagtge ettteggate geageeecag atggagteaa eategtaett geteeategt 360 atgcacatga gatcgcggag catcctgact tgaaccccgg cccaatcgct ggagacgagt tcaattccca tattaatgga ttcgaggtgt ttgcacaact gggaaccagt gatgtcatct ctgagtctgt gaggacgaga ctgacccggc agctgagtaa gtgttcgtcc tagaatagcg 540 tcacctcatt gcttctcgcc ttcggatgaa ccatattgat ataccaaatc tcttagcaaa attgacgccg cttctcacta gcgagactcc ccttcttcta caatcccaat ggaaagatgc accaggiate tagiccatea giagicegee egetitigie acacaacete tacigatace 720 tegeactaga etgggtggag gtgageeege atgagaegge tetgtttatt etgtegegge 780 tetettetet egtettegtt ggegatgaee tegggegeaa eeeggattgg ataegeatee 840 taacatcata caacaccgag gcttttgcag cagccgaaga gctcaacctc tggcctcaga 900 tacttegace ceteategee egtetaaaae categtgeeg eeagettegt egatatatee 960 gtgatgcacg tgcgcttctt gtcccagtcc ttgagcaacg gcgccatgcc cagagccagg 1020 gtgatcgaag ggagtataac gacgcgatag aatggctcga cgagacgtct cgcagtacag 1080

gtcaacccta tgatcctata ttatcccaaa tgctccttgc catcggctct ttccatacct 1140 ccagtgacct cctggggcag gtcctccttg acctctgcat gagaccagat tggaaagttc 1200 tggtcaggga gcttcggaaa gaaatcatat cctcgctaca gggagagggg tgggataaga 1260 tegetttgaa caacettaaa etgatggaca gtgtgetgaa agagteteaa egtttaaage 1320 cagecteaac tggtaagett cetetateac cetettttea caagttgate ceeteettt 1380 ctaacctggc catgcataca gtaacgatgg ggcgatacgc ctcgcgcgag atcacactct 1440 cagacggaac aataatcccc aaaggctcaa cagtctttat cgccaacgtg gccatgcgag 1500 actocaatat ctaccocgac cotgatgatt togttootga cogttttacc actoggogtg 1560 aaaagggcga tagttccgcc tacctggttt cggcttcccc agaacatcta ggctttggcc 1620 ttggtcgaca cgcgtgccct ggaagattct ttgccgccaa cgagctgaag attgtcttgt 1680 cccatatgct tatgaaatac gacattaaac ttcctgataa tggcgcggtt gcacccagca 1740 agteggggat ettettagee aegaateeeg atgetaggat etgtgteege egaaggaagg 1800 aggagatagt gatetgaaat tgacetetag tegtttettt tattattett agetgtette 1860 tgtccgctat tgggttgttg gaaaattatt ggggtgcttc gcaggacgct tgttgacgcg 1920 aacaaataat gattataata ataaaatacg atgctttcac catagtggag acgatcgcgg 1980 ctttttgagt actgtgtcaa atagatcttc tggtaagata cctatgcgca tcacgctatc 2040 catgccgttg ctgatcagtt gtaggtttgc gtggacgcgg acgtggcgtg cgctcaactc 2100 gctccatgca gcaataattg caggctgctg ccttcatgat tctggtcttg aagtctggcc 2160 cgatattgtc ctgggatggg catacaactc ttagccacgc gctcgctgtg gatcagagtc 2220 aaaaagacgc gaacacgcaa ggagccgtcg ccgaatctag aggcatgcag cacggattct 2280 tecatettea gteeteeaga atteeaaaca eegaggeata agtggeggte tgtgttegte 2340 catagcattt gaactccttg cggaagtatc atcccaattc aatcctgttt gcttgctctc 2400 ctctctctag tattctttgc ctacaattac aggggaatga agcgacatct ataagtcaag 2460 attcaagaaa gagatttatc ccgccgtgtc ggccagatta tcatagcgcg gtgacctttc 2520 tegatacege geatteatte eegegateta tgtacgegae etcaacagat aattggtgca 2580 ccctgttatt ttgctcaaag taagccagtc gagctaggag ggtaagagga tgagtacagt 2640 ggtcatcgcg cagtaggaat gaagtcatcc tgccaaatgc atccaacata aggttctgat 2700

gttcgcttta cctatccatc tctccaagaa cttcgtaaag taaccctaat ctgaccatct 2760 gccggtgatt atgagcccct ttccagataa tgggctctct cataactgag tatccctcgt 2820 tttaaagggc gcagcatccc cgtaagagat atgcttcgct tctaaccggt attggagatc 2880 cttcagcctt atggtatcgt agaactcgta gatctcctcg ataaacctac agtcgtccgt 2940 catetteaga ataaagatgt aeteattete ataggeteea aeaatgettt etgeggaage 3000 cttagcgcgg atcatcactc tectagcage etcategaca agggtatggt etggetegat 3060 gatggaaaag tcaaatcgtt tgaaagtagc gatgaactgc gggaagttcg cacgggtttc 3120 ctcgttcgtt acgacatttt tgttgaagct ggggcagcac tggtggtaaa ggcatgttgg 3180 cgtgcgaatg gagagaattt cctctatgtc aaaggacccg aacgttgaga caaatctgga 3240 ggttgttctg aggagctttt ctcgtgtggt ggacatggtt ttgggccttg tcctgtcagt 3300 agggcaatca tgtggctctt aggacttaat gaaaacttac agcttattat cagtgacgag 3360 gataacagag attggggtca tagtgatgct gggcctttgg tacactgata tatctgctgg 3420 cattagtgat tacgtaggct gccggttggt gtcgtggaca attccttaca tgctatgtgc 3480 tgagetetga tattgeteac cataaateet gtgetacagt gettageeet teactagett 3540 ct 3542

<210> 3084 <211> 2101

<212> DNA

<213> Aspergillus nidulans

<400> 3084

gacatgtgta aacagtccat tgaggactgc ctccgtgtga gtaagacttc cggctttctt 60 catctcttca ttaacaaatt gcttcatttc gaccgaaagg tcggtagcat tgtcgcggcg 120 gaagagtata ccacgtatgg gctcggggtt agcaatgttt tgcaggaggt ggatgagcgg 180 gaatgagaat tttccctccg atagatcttc gcaaaatcct ttcttggcag tgtactagga 240 ctcaactatc agccagtgtc acgaattatg gtgaacggta agttacctct tcagaagcta 300 agtttaggta atcgtctct atcggtagt atcttcccag caaggtgaaa agatgcatca 360 attcggggtt cggctcgctt tccgactcta cctcgagaag tcgaagcacc agacggaaga 420 aaccaccggt tttgttgtcc accataacaa ggtactcttt tgttgatggt aatattgtgt 480

taaatctcca atgtaactcg aggccctgtc cgaatgagag agtttctagt tcatctgcgc gtgttagctg ttacagttaa tcccaagggt atacatacct ataaatacgt ctgcgcactc 600 attggagtgt ttcagcttct tcaccagtcg actccctttg acatagagat aggttgcgct 660 gttgagagtc tgaggctggc caaagacagc gtgggctgct ggtcgcccgc ggcgcagccg 720 780 tgatccgtct tggatatcat caagcctacg ctgtcagttt gatgttgact actgaaatgg cagtccaaca ttaatacggc atcgaataac atccttgaaa cttctccgat tatgtttgtt 840 gagtcctcag gcaatgttag ccaacactgt aggcagtcga ttaagcggcc gagggtcttc 900 ttcccgggca acgaccgtat atattcccac ggagcaagaa caatctgatt aattttagca 960 tgccagctgt gtggtcggcg tgactactaa cctccgcagc tggggctttt tcaaacggta 1020 cgactatttc cctggctaga ggcgccactg cactggtgcg tttatggctg gcctccgagg 1080 agctatccga ctcagtatgg ccattagttt tcatggtcat ggccatggct ggaggggggt 1140 agcctggcaa cctccttttc ccgtcgtaac cgcgccccac tagctgagct ctatcagcgg 1200 cagaagaaaa agatcagtct gttgatacct cgtcgtgcag actgccagta gcttaccccc 1260 ccataagtga ggatggagtt gaacatgtac cggcgcagcg catctgtttt agggcttccc 1320 gaagagttcc agttttcgta ttcagccatc aatctggcct cggccgcaag aacctcttgc 1380 ttcaaaacat tgccggcttc ctgttcgtca tacccgtagt tgctcataag cacggccatt 1440 ccgttatgca tcatatcaag ggtgccagcc aagaagtgct cattgaattc tttgtgaaaa 1500 ctgtggaagt catttgtcaa cccggttatc agatcgccaa tctctgtcat gtgggagact 1560 gaatcaagct ctttatcact gacgtaaaat ccgtttatag cgggcaccaa tctcgacagc 1620 accctatgcg aaaccagtca ggttattcct agtgataaaa aaggaagttc agcgaaggcc 1680 ggagagggct tacccgctgc caacagtttt gattctgtga gctttgtatg cttcccatgt 1740 cactgtgtgc aaagctggca cggtctgtgc ttgcaggcca gtgtcaaaga aatcgaaact 1800 gcgcctgaaa acagcatcaa acgcatcggc tccgttcaag aggtccacaa ggctttgaat 1860 atatagetea tigatetega actegeageg gitgegeett eccagetita etteggagag 1920 aagggcagcg cgcaagtcta gttgaatcct ctcatgctag gggactcagg tactatcttc 1980 caggtaggcc agggcactta cggtaactga atccagggca tctgttgcat ctagcccgac 2040 agggacaggg tattgtgcac gtatgtggaa tgatacctac catcccaaca caagacatta 2100

<210> <211> <212> <213>	3085 754 DNA Aspergillus	s nidulans				
<400>	3085					
tctccgaatt	ggatccttgc	ataaaatgaa	gaggtttggt	gttcgggcga	ttctgatcca	60
gcttgcaaac	ttcattcatc	ctcgcttgat	gaatcatgaa	gcgcaacggg	acccagcaga	120
gcggagagaa	cgggagcttc	actagcagaa	gaaacatgcg	atccttcgaa	aatgagtctc	180
aacatgattg	gccgctctgt	tcgagctccg	gggctacaga	gggctgaġca	caacgtggtt	240
tgtaccagat	cttcgccccg	ataccaggga	gtatcccatc	agcatcgttg	tatgcaaata	300
tcactccgct	tctgccagaa	gatttgggtc	ctctgataga	cgggaagaac	cccattgcaa	360
catgtcccta	gtctcccggc	gaacagagga	tagttggaga	cacaccaagg	aggtgctgcg	420
agctagcctc	tcgatgcccg	ttcatggagc	cacggcatca	tacataaact	ggcggattac	480
tttggttgca	ggaaggaggt	tcaccgcaga	gtcggccaag	aaccagaacg	actacgagca	540
ataccagaaa	ttgcttcgat	tcgttggata	agtctagttg	ctattgtggt	tcaagcctca	600
cttttittgt	tattaccgtg	agcaaaaggg	ttggataaaa	agagtgaggc	ggtttcgcag	660
tgatccgaca	ggtacaacat	gactagaaac	agccctcgca	acgcgttcct	aatgttcatc	720
tatccgtcac	aggatcgaag	gtgagttccc	tggg			754
<210> <211> <212> <213>	3086 444 DNA Aspergillus	s nidulans			·	
<400>	3086					
cttgtaatcc	ccttcattct	agaatcctcg	ttctcactat	acttcctcaa	acttttcttc	60
ctttctccgt	tctccggagc	ttcacccata	cggtcaccga	cagcttcaaa	tattcctgtt	120
attaaaattc	agctccagca	ccagctccag	cttcgataac	cggaaaatat	ggcacagacc	180
aatggcgaga	tggagcactc	aaaaggtttg	ttgccacgga	gcattcctag	aacactgaac	240
taattgagtt	acagagtete	cagagcaaat	caccaatgga	aacaaccagg	aggtggtcca	300

ggaggacgat ggcgctgacg gtatgtagga ttgatattgc tacgtgtgac tatcccgaaa attagtctga cagctgttct gcacaggcct cttccagatc tccgttaagc ttcctcatga 444 accttacaag atccaggtta tggt 3087 <210> <211> 2031 <212> DNA <213> Aspergillus nidulans <400> 3087 ccctcagact gcatgctgaa ccgtcttcct acatacagat tacgtgtata tcagtgccct 60 gcacaaaagc ggaaccacgt tctagagaag catactcgct tcgttgcgtt atgaagtgtc 120 cagategact eggaaatgte tacteggtet ectagegaat atgggaaega getgeetttg 180 gccatcgcag acgcgacggc agatttaagg aagtccattg ttgtaatttg gcgccagctc 240 ttgggctagc taagttcgtc ttttcgggct cggggaactg aaaaggccgc gctcaaagag 300 gctgcttgat gatggcgatt cggaggagtg agggagaagg attcgaggag ttatcgagag 360 gcggaggagt tccgtgctcc tggaggttta tagaccgtgg ttgaacgaag tagttgttct 420 gttgttgtct ttttgtttgg ccctgctatc tgggtccctg ggataatgaa cgagctccgt 480 aagtaccccg cccccgattt ggcttaggct gtctgtcatt taatgcatcg cgcgtatcga ctcgaccaaa acttctccct attcaccaca cgccatgtca tataatgtgt tatcaacttg 600 acaagctatt tgaaaaggtc cagtttacac cgcttctatt cttgtagact aggcaagtaa 660

ttgggctage taagttegte tttteggget egggaactg aaaaggeege geteaaagag 300 getgettgat gatggegatt eggaggagt agggagaagg attegaggag ttategagag 360 geggaggagg teegtgetee tggaggtta tagaeeggg ttgaacgaag tagttgtet 420 gttgttgtet ttttgtttgg eeetgetate tggggteeetg ggataatgaa egageteegt 480 aagtaeeeeg eeeeggatt ggettagget gtetgteatt taatgeateg egegtatega 540 etcgaeeaaa actteteeet atteaeeae egeetatet tetgtaget tateaaettg 600 acaagetatt tgaaaaggte eagttaeae egetteetatt ettgtagaet aggeaagtaa 660 gtgateaeta ttateaeete gteataeett aeegtteeegg eaaaeetgga aggeteeegg 720 gaeaetggaa aggtetaegg ggaaaetteeg aeegggaeae eeaaeeegg ggaaeteeeg 780 etcageaeae eagaggagte egeeeeeae gtatteaea eeeetgaaeegg ggaaeteeeg 7900 eaggeaeatt ettgataaaa aggeaaaaag gtetageeg eageeeege ttaeetgggg 1020 teegeteege etgggaaeae atgtgaaaa gagaaaetaa tgaaaeegg ggetageeg eagetaggat 1020 teegeteege etgggeteet aetaeeeg egggaegteg gggaaeete 1140 eagetgggat egggttgaaat geggggtgga tttggtgtt gtggaateta gtgeetgggg 1200

ttttgtggcg ctcetttgga tgagaacaag taccgcggct gggtgttgcg gttttggct 1260
aatgaagacc aaatgataaa ctgaaaagac ctgaggagaa tgggattttt tgttttttc 1320
acttctttt ttttggttgc atactgggtc gagacactac ctgctaacgt gttgcaacag 1380
aatctcttcg aacacgacgg acaccactag gcatagettt acacaatgta cagtagcaac 1440
tttatctgtc ctacaagtgt cattcagctc atgctttact ttatcaactc tccctctac 1500
ccgcaatctg tacctgaatt taacctggct tcagcctgca ataccettcg ggatcagtct 1560
cgccatccaa gaggcctggc atcatgaagg gttatttgaa atataagaag ctgcaaactc 1620
agcacgtagt atcgatatag atcgatccag atagtccata ttctgataaa tctcccatgg 1680
tcccgatata atatacgcaa agcgggagcg acgtaggac gagcaaagac accagtcttg 1740
gacagcaaaa gaccacggcc ggcttagttc aacaatgtgc cttctggtca tattctgata 1800
ctctttctgt ccgactaggc caccctgaaa gatggattcg tcaagctcag ctgttcttga 1860
tcagcagaaa ttctacaccg cgttccatgt ggtagaccaa ccaacgacag aatgcatccg 1920
ccctaaatag gtatataatc ggcatgtgcg gaccactaaa accgaggaaa agctagcaat 1980
agcttcaaaa atagtgcgct tcaataatct gcgaacgatc agatctcgg g

<210> 3088

<211> 936

<212> DNA

<213> Aspergillus nidulans

<400> 3088

aaagtgactc caatcatacc aggattcccg ctctcaggat tcccatagcc agactcaaac 60
agaaattgcg gaacgtgtgt tgttttaccg cttcctgtgg ctccccatat cacgatggca 120
gagttgttat ggattgcttc catgatcttt tgctcttcgc caacaacggg gagtttgaga 180
cgggcttctt gaatatgttc gggacggtcg acttgaacac tgaaggcttt ccggtacggg 240
ttgccctttg tgacttggag ttctagaggt agtggctctt cctccacagc tctgactgga 300
agtgcggatt tggggatgac ttgtggctca gtcgttattg gaccggatgt gggcttaaag 360
cctacaactt cattgatttg ttgtctggcc catgatttga aggctgattg tcggggctta 420
attcgtccat cagtgttatt ttcgtcttcg tcttcgtcat catcatcctc tttctcgtcg 480
tcttcatcct cgtcctcatc atcatctacg tcttcgtctt cgtcttcgtc ttcatcctc 540

tcatcttttc tgtcttcatc ttcatcacta ccactatcgc cgttgtcgtc aacttcactc totgattcag aagaatcato ggagooogtg cootottott ogotttttgo gtogatacca ggtccgatct cttcttcctt atcctcgtcg tcggaatcga aaccctccca tggtatctca 720 tttaatggag ctttcggtgc tgccttcggt gcacgctttc gctttttgag aatcgggaag ccatccggac caagttcaag aggacgtttt aacccaatac cgttcatcag ggtcgatgct ttctgctcct gctgcccttt accagtagcg tccgatttta atccagatag atcatcgtct 900 936 gtttcatcgc tagaataatc aggcgcattg cgcttc 3089 <210> 4806 <211> <212> DNA <213> . Aspergillus nidulans <400> 3089 ccttttgact acacttcgaa caaccttgca aaagctgcgt ttgaactaat ggcctcagca aacacactgt atctgattta agatattgac ccaaggcgtt atgataagaa aaagggagac atgatgcgac tgcagatgag tacaaaaggt gaggaatgtc gacaaggata taccaaataa tgttagatga acaacccctg cgacggctgc tagatactat atgagcatgg ataccaactg aaaaagaaga caaaacccag agaattttca tgctcgctgc gttgtgcttc aatataaata aacctaccca aagcataaaa caggaaagac ggccacactt tactatactg tgccatacaa 360

aacaacaagg ggtatgtaac catgactaaa tccacgcaaa gctttaagaa cagaaggcaa 420 tccaagaaga actagtaaaa gagacatggt aaagcagact taaacagttt caatacgcgc 480 atcctgcgag aggcccgggc gatgcccata cgccggagct gtaaccgtgg gagtcttagc ctgtcttaca acaagccttt cattactaga gttcaagtga ggggttcttt tcctgacagg 600 gacaaggacc tgcttcttgc cctttgagac ggagacagag cgtgcgaccg acacttcgat 660 ggttgggatt ggagcattat cgcctgctcg ggatgttgtt cgtggtgggg gcaacgtgga 720 tatggttett getgtggeta cattettgte tetgggegga gaetttgteg tgettaaagg 780 tgagaggatt ggggaagatg ctgatgtcac tgtgggtgtg tccgagaagg tctctgttga .840 gtgacgctgt ttgagtccga acttgaatgg agtctcgcgt cctgatggtg aggttctttg 900 cttttgttga ggtttccgag gatggtactg tcatggttac cggtgcttta tttgaatgtg

atactececa ggatggetet tteatgeegg egtatgtteg gattegtteg aacttetgta 1020 tcaaaagtgg ttcgtcatcg gaaccaattg aggttgcaga gaggaaagat gtgatggagg 1080 cctgggcgcg gtgggattgt gttttggggc aaatgtccgg cgttgagcca tttgagccag 1140 gcagagcctc ctgagattgg tttcgaggcg ccgtcaatgc ttttcgcaat tgatctgaag 1200 gctcggatgc ctttttgagtt ccgagaacct ttgtagcctt gttggctggt acagttggga 1260 acaagttaaa actgggggat actgctgggg aagttgctcg tcgtcgaggc gggcacaacg 1320 gtggagatga ctaggacgtg cggccatcag taagttattg catggtggac cgacgttcgg 1380 aactcacctc cttgtcagga attgttaaat tatccagtgt tttgctccgc ctagccaaca 1440 gggagggccg atcattgttt agaaggccac caaacattac gctgtaccgt tccatctcaa 1500 cctgaggtat ctcaacctgg agaaaggatc cgggatttgg cttagaccct tgctgatggg 1560 ccggagtttc attctccgaa gcaagacacg gccataattc tgtattctca attggtgcgg 1620 tettggtace tgeteteege egaggtttgt agtetatega atgtgtagae ecetgegaeg 1680 gcccgtcatt cggagcttga acctggtaga acggcttgtt tgcattatgg gcaacggcgt 1740 tetttgeett gaacagaeet ecaattetet tecaettaet tggettgege tgeagegatg 1800 aattaggcct ttcttcgtcg ggaggcgtgg gcggcggtat tcgttgcggc tgagatgcag 1860 tattatattg ttccaacagt cgagggcttc caagagcaat gccgatcatc gactcatcca 1920 ctccaaggtg cgtgtctaac gcttcagctt cgactggtga gctagtaagt tgaaaatcaa 1980 aaccaggcac ctgagaatct ggcttttttc tgcgattatg cttatcagac atgccaggat 2040 gctgtccctc tttgaaaacc tgatggattg gacgactgta actgacgcca gcctggatct 2100 cgcagaggtc attccttggc agggcatctg tatagttcaa ggagggattc gaaatgcccg 2160 gcgctcgagc tggcgagcgt gactttccaa gtattccttt ggccattctc aatagacgcg 2220 gtccataaaa gatgagtcgg tgtccgattt acggcgtatg ttgaatggaa atatgaaata 2280 aaaatatata tatatataag gaatggacag ccttccagaa ggccgagacg agaatcgaaa 2340 actaaaggag cgaaagttaa agccgtccaa ggaagaagaa agtggcgggc cctgatatta 2400 taagggcaat aagcccttag ctgaacaccc tggtgtccgt gacacaatgt cgggggtttg 2460 gtgggccaca gtctcacatc taggatctag acgagacaat ctaggagtgt tagcgctaga 2520 ttgacaggga gtaaccagac gataggagtt atggtgattg gtatgccacg agcccaacga 2580

aattagccgg tccagtcatc tttgaataca gccagcacca tcggaagccg cactcggtgc 2640 atttatcaga gcgtagtggt gggcgttgtg gttgcgcggc tgttaaatta tcatagcggg 2700 ctgaggagtt gagctgattc attattggtt tcatgttact ttgaaacttg gcccgctcga 2760 ccaatgaaga aggatagcgc cgggcatcca gagatcgata atcaaacgcg atagtaatag 2820 tctccctagg aaaagatcag tccgatctat aggcggaaca gaagagagtc aatcttgatg 2880 cccgttcggt gcaccgttca tgcaacagtg ggccgcagtg cgtgagaatc tagacgaaac 2940 ccaatgttct caggaacgac ctagagtatc acacggatct cacgtcctcg cctctactgt 3000 tgctatcgta gtgatttgaa cgtgcggcga ttctgccagt ctgcacgtta tgcgacgggc 3060 tgaaaagcac gggtggcctt attgttagtg cctggaattc gccatctcaa cgccctctat 3120 agcettgaga ecaegeecae geegatageg aaagggtaag tacaaegtat tttecaecee 3180 gtttgtcaag aagagagcac cgaaaaccgg taacctaact ctgaagacag tgtttgagtc 3240 gagagttggg aaaatgcgtg caagaacggg atgcagggac gagctccaaa tgggctagtg 3300 ttacgaatga tcggcacctg atgcgagcca cacgtgccgt gccgttacgg aacgcagtct 3360 gctgcggtgt tgagttagaa gacttaaata tatagagcag tgcagtccgt tgaggactgc 3420 cgtatcaggt tgattcggaa atatcgggtt tgcataatag actgcgtggt ttggatggat 3480 ttgaggaggt tagggcttaa ggaaaaaggc tctgtggtct ttgatagctg gagaactcgt 3540 ggaataccgg agcccaccat ttcagcagag gctcaccgcg agttcttaga tggagaccct 3600 gagcagtggt tttgacgtgg gctgtcttgc cgttggatgg agctctccgg ctggcccttc 3660 tegeageggt gtgacetgag ggeegagteg teteetteet egtactactg gegtgeegag 3720 gtcatattca tagtgcgcag tttcagatat caggaatcta acactgcagt aacgaaacaa 3780 aatcggtttg tatcatttct cgtaatcacg catttcacac agcaattgtc gcatgccaga 3840 tgaagaattg cgcagaggcg cttgatccaa gacggaatgg cggggcagct ctagttgcct 3900 caggogotga gotaacccca coccacetta cotcacetto tttotgetto ccacegacat 3960 ctctcctctt ctccctatcg caacaaataa taatctcaac agctctgtcg ctggtcgatc 4020 tetttetget tetetgaaat egtetaetgt eestaeteaa eagttgttge egteegtete 4080 agacgacete ttetecaceg ttteccatte tgegttecae tgetgettgt ttatecaace 4140 gttactatgg gtgctcactc tgctgtctgg caacgtactg ttgacccaag tccctgaatt 4200

cttttattga acgcggtggc taacctttgt ccggcattag aatatgtcga ttccaggtac 4260 cgtgcctccg tcattacccc gcctcaacca atattggaac ccccgcgtcc tccgcattga 4320 ttctgaccca agatacctca cagtctgatg ggatccggcc aatttgacaa agccgccatc 4380 ctcagccctg acttctccgg cgttgaggct tcgtctcccg gcttcacggt acgcattcca 4440 tatccccggc cagcttccgc ggcgagcttc cgcctccttt ccgaccggcc ggatcgtctt 4500 gtctcgacta tcatcgctga ccacaaagac agatctcgcc ccaggaaatc caaggtatcg 4560 gatctgcctt tggtgacagc acctgggcca tgcagaacgg tgtcacaatc ggtggagaga 4620 agttcctcgc tattaaagct gatgaccaga gtgtttacgg caagaaggta actccttgac 4680 cataagatac tacccatctg gcttgggcag tactaactga gataaattct agggcaagga 4740 gggcgttgta ttggaagaca ctttcttgat atgatcggca cacaccgagg cgtcagacac 4800 cacgcg

<210>	3090
<211>	1063
<212>	DNA
<213>	Aspergillus nidulans

<400> 3090

gacgacgtaa accagaagag atattgtcag aagaaaatct ttgagaataa catcacgaga 60 tgaacgcaga ataaagccgg attccttctc ggaacgcaac atccgctagc acttcaacat 120 tecacagteg tagtagttea tegegeggeg egaateteee tgeaceettg ceaatageae 180 tcagcagccg ttcagccagt tctttgcgaa agtccagagg tcggcgcctg gggaatctca 240 tcttgtgtcg cgcatacgag ggatcctgga tagggaagtg aatatacaag ctagttgcgt 300 ttcatgggac tgagcgccac tggctcagac tgagcgaaca aatacagcgt gtgagtacac 360 atccgatagg aactaccttc gtaattcctg agtaatttca tgagggatga aggcaggatt 420 agaatcgatg aaacggtgat aacgatgatg gaaaggaatg gaaaaagaga gctgaaaggt 480 cgagtcagtg actggggcag gttgcgtagg cagcgccctg cttgacttgt gtcctttccg 540 acagggetea tgeateatee aataacagtg geateatgtg egeaceaace tetgeaggag 600 ggtactccat ttcaccccgc aggggtgtcc actggtcaga aaataacaaa cgctaagagc 660 accgcccacg tcattagagc acaggctagt tcgtggctgg agcggggacc ccttatcggg 720

tgggaggatt gtattataac cgaagcatta taggaaaaaa agtccagtaa acttcccagt 780 gtagcgagca tgttagggca aattattct ctaaagtttt atccgggcgc agttgggcag 840 gtaaagtgac tgaattaaca tgagagaata ggtagtatgg gaatacttct gtttagtaga 900 cccttcatta attacgtcaa tcaataaaga gttactatga gcatgctatg taatttccca 960 ggaataggca gttcagctat ttctgtggca tataaacgta gcaagatcaa ggtggtcggt 1020 atcaactaag cttatatctc attcagtcag gggatggacc gct 1063

<210> 3091 <211> 1232

<212> DNA

<213> Aspergillus nidulans

<400> 3091

cttgtagcag tgcgcaaaag agatgtgaac gtgctcgaga ggaaagtcat cctcaggaag 60 ttccttcaga cctagaatgt aagcgtcctt gggtgcatcc ttgacccaag aaccttcctc aacaagagga gcgccaacct gtacaatgcg tggtcaaaat ctaggcacgt tgcatttgga 180 ggtgaggcgt tcgaaccttt gcgaattcgt catctatcga aggaaaaagg tcagcgaagt ccagtacaaa atcagaagcc aggatactag tcaatgcgaa cacgaccgca cccaacatga gcttggagtc cattagacaa atcttaccat cgaagatacg ctgagtagat cgctcaaccg tcacctcata tccagcatca ataagagcct tgcaagtggt cggtgtcact gctcagcaga 420 ttaacaaacg gccgcttgaa tgcatgaaaa gtcacataca agcagaccgt cctcggcagg 480 cttggtctca gcgcgcagcc agatcttgtt ggaacccatt gtgtctgaat atcaactgca atacaaatcc acaaagacgc tgaattgtgt ctaggaggat gacttccaat aaaaaagagc 600 660 ttgtatgact cttcaacaat gacaccgcct ttcccctctg cgatagtggg ggaaattatc agtgatgttc ttccgttccg aagttgcgtg agtcagcttt ctgttcacaa caaatgccga 720 tgtcggcacc tgagaagtaa ttcatggact acggagcatt gaaataacca attctagcga 780 atgccccaat acagttgcag ggaggatcaa agttatatca tgcccataaa actttaagtt ggcccagtca acggccaatt ttaggagtat tgttgatgac aatgctcatt acatgaatct 900 cataagcttg aaggccagaa cattccaagt agtcaccact gcacaccgtt gggagttaat gaaagaatct cacgaaacga ctttggtgcg gctacgcgtc ctactaccga tgccatcggt 1020 agggatacet tittigaceg tgtcettggt etteetgge egacecett tettettetg 1080 etgeggtgea gaetgaceag gateggettt titeagitege gaattggggg atgigetate 1140 ageagegact geatecteat tegitetagg tittetigtag teaggetetg tegaticeae 1200 teegeetgaa tiegtgatgg atggtgiteg ag 1232

<210> 3092 <211> 2383 <212> DNA <213> Aspergillus nidulans

<400> 3092

acaagtgaac tgatcaacga tatcctcgcg caagtggcga ccaacaccga ctcttcaaag 60 aatgtgcgaa atgcgatcct ttacgaggct gtcctgacta ttcttgatat cgaagccgac 180 tcgggtctga gggttctcgg tgtcaacatt ctcggaaagt tcctcaccaa caaggacaac aatattcggt acgtcgcgct taacacgcta aacaaggttg tcgcaatcga gccgaatgca 240 gtccagagac accgcaatac tgtcctggag tgtctccgtg acccagacat cagcatcagg 300 360 agacgagete ttgatettag tttcatgetg atcaacgaga geaatgtteg ggttetggta agggagctgt tggcgttttt ggaagtggcc gacaatgaat tcaaacccac tatgacgacc 420 caaatcggca tagctgctga ccgttatgcc cccaataaac ggtggcatgc cgacaccatt ctgcgggtcc tcaagctagc tggtgcgtac gtcaaggaac agattctgtc gtccttcgta 540 cgtcttatcg cgacgacgcc ggaattacag acttactctg tgcaaaaact atacgtatca 600 ttgaaagagg acatctcgca agagggcctc acccttgctg ccacttggct tatcggcgag tatggcgaca acctactccg tgggggtgaa tatgaagaag aagaactcgt caaagagatc aaggaaagtg acattgtcga tctttttgac aatatcctca acagcacata tgctacacag 780 840 acggtggttg aatacatcac cacagcttca atgaagctta cagtccgtat gtctgatgcg 900 tegeagattg ageggeteeg teggttaetg cacaacegaa etgetgatet gagegtggag attcagcagc gtgctgtaga atacggcaac ctgtttggtt atgaccagat ccgtcggggt gtcttggagc gaatgcctcc tcccgaaatc cgtgaagagc agcgggttct gggtccgtca 1020 accaagaagc gacagagcaa gatgcttaag gacaagacga ggaagcctat caagacggct 1080 gagcaggata tgcttcttga tctcatgggg gctccgatgt tccggtaacc agtccaacca 1140

tgaacggatc ccagaacact gccgatctcc tggcggacat tctcggcggc gattctggtc 1200 tatcatcccc tgctcctcaa gccgctcaac agccagtctc aaataacagt gcgatcatgg 1260 atttgttcgg ttcgaacggt ggtacacccc tctctcaacc cgctccgcct cggcatctct 1320 cgatctgtta ggaggcgccg gcgctccagt ctctacacct tcccttcgac atccactgcg 1380 tacacagcat acaacaagaa cgaattggtg ctttctctgc aggtacagcg aggcaacaac 1440 aatacagege agatecaage teggtteega aaceagtega getteageea atttaceage 1500 gttggtctcc aggctgctgt gccaaagagc caacgcctgc aactcagcgc catcaacaag 1560 gcagagettg aagceggaga egagggtgtt cagatgetga aagteaetge geteaatggg 1620 gtaagttttt ccctacctaa acttattcgt ccctgcgtgt taactaactt ttttagccac 1680 teccateaaa aeteegeett egteteegeg teacataege aaaggatgge teegageeca 1740 caacagacca agtcgactgg tctgagtcgt aaataacgac ctcaacccaa acccgcacag 1800 tacattcgag ttttagatca gttaggagga gttctatctg cccaggtttc tggttgcagg 1860 ttgaatcacg tagtetttat aataccatae catacettte atattggget gateetetge 1920 gggacaaaat atgagataac aaggccgctg ctagtacccg tggcaaaggt acttgccatc 1980 caccatgttt gtattttctc tggggcaaaa gttctctagt gactatctac gcaatgagtc 2040 ataatgagtt gcttcaagag cgaggctatc tagatcacct agacataact cagacgtcta 2100 tettggggee catetgeaag ttaggettga eegcaattat accaaaacaa attacateag 2160 tagacattta aaattgactg ctgtttagtg cagcaaaata cgaaaattac gctatgatgt 2220 cggttttcta aataatgtat tatgacacta taaaatcaat gcaataaata gctaggataa 2280 actgatecta atetegtgge tgtaagtegt tgetgtegtt aatgaataet aaagtagtga 2340 tggtagtcgt aagataatag acaaaccgat gtaaacagta ccg 2383

<210> 3093 <211> 1357 <212> DNA

<213> Aspergillus nidulans

<400> 3093

gcttcaatct tctcctggat aagctccttg ttctcctcat accagacggc gacgcgacgg 60 tcgtcattct caacctcgtt ctcaaggaag ggagtccatg agtgcaaagt gcggagatgg 120

gtggtgcgag gggagtcgct aggggcaggc gacacaccct gggcgacact ccgctgcctt caccetgaac aggageaggg catgeggtga geatgegett gataatgtae teetegetaa tacggcggcg aacacgccag tagaagaagc gacgagcgtt cttccaggag agggcttggc 300 ggatggtgtt cttggcttgc atgcggccag cacgatcgtg cagatcggca aactgcaatg 360 caatctgcat gtaaacagga aggagttgct cctcgcgtgc cgccattttg tccttgatgt 480 eggaaagttt eteettgetg aggttettgt eetgaagage geggegaagt teteegtaag tagggtccaa acgagccatg gtctccaact gcttgtcgcg gcggaatttg atgttaacga 540 tacceteggg etecaggaca ecaceaeggg ectecteate ggegtacatt tecatetggt 600 660 cggggttgat ggtagggtcg acaacgaccc aagaaccacc acggagttca ccgaacggag 720 gaatgtacac gaaaataggc tgctcgtatt tgacgagagc atccacgatg taggaaccgt 780 acttcagaac ctcgttgtac atgtcacgtt gtccaccaga gaaacctctc cagttagcca 840 atatcataac gggaagctgc tcgccgttgt tgaagtcccg gagggcctgg gcagtcttga aggacgagtt agggtaccag acaccgcccg cttcctgggt gatcatttcc atagagtcgg ggttagcagg atcagccgga gtaacgttct ccacagagcg tgtctcgaca gcgataacac ccatggggat gccaccaagt ctagcacgac caacaacgac agtgcgagcc cagccaccaa 1020 gageeteete gaaggageeg gegtegaaaa gaceagggag gaageettee tegtetteet 1080 taccattgat gagccaacgg acatcgtagg cttgctttgc aggagggtgg taagaaacgt 1140 cacgatecea agggteggeg agtggtegga tgggtggeag agageeette ttttegggga 1200 cgaaggcaag ccagtcgaca attttctcga caccatcgaa gtcgttagca gcggtcatgt 1260 gagaaacacc gttcctgtac atgatctgag taccaccaag ctgcaggttg gaagtataga 1320 cctctctcc tagcagcttg ttgatggcag gagcccc 1357

<210> 3094 <211> 701

<212> DNA

<213> Aspergillus nidulans

<400> 3094

agagatagcg aggcaatgca ttcaagtgcg ggtatcataa ggtcatatcc attatcggac 60 gcatgcagcc atccaacaag gcgtgcacgc taagtaaaac aaatcgctcc tgtacaatat 120

gcacgaaatg tatcgtcccc agatttctcg atagaggccc gatcgtgtca acaaggtaga cattagtcca cttccatggt ctcctgttct ccttccacct tcactgtagc cttatcttca gagttggcct ggtgaatctg ctgaacaaac tgtctcgcag ccgcccagag ctctgcctcc ttctccttgc ccacagtatc cttcctacta ttcagccagc taacatccaa cgggttcgat 360 gegeeteecg cageegeace tgaaceagaa teaceegtte tagaagaega gteeggegea 420 agaattgaag cttcctccag agcatagacc tggcgccgca atcgaacatc gattgacgaa 480 agaagcgcaa agtactgtga cgtagcttcc ttgaatcgag ccttatgaga atcgagcgag 540 ttqtccqcaq acqcqaqaqt tqtaqaqtcq ttaqatcttg cgtttgtaag ggcttgaatc 600 gcgagtccag ccgagtggat tagtttcgat acatcctaga acaatgaaaa tacgtggtta 660 701 ggaggagatc cttaaacaga gttgaagtac aaagctctga g <210> 3095 <211> 2733 <212> DNA <213> Aspergillus nidulans <400> 3095 gggatattag aaaaacaaaa tattaaaaga gagaagcaat ggaaataatg taggtaataa tttagggaca ggataaggga taagagaatg tgagaaagtt acaacatcag aaaaataaca tgaaagatga aggaaagaaa taaacataaa gactcatagg aaaggaaaga ataaataaaa 180 gtaaaagatg tgatacatat gtattagaat agagagagaa agagatagag aattaggtga 240 300 tagaaggata gattatagta gaataaaaag ggaagagaat aatcaagagg agaaagaaag agtaagaagc agattaaaaa gggtgataga gatgtcgtcg ggagaataga aaaaaaaata 360 420 aagtatagtg aaagtagata agcttgagtg ggagatatag aaagataaat aaagggggtc 480 aagaagatat agaaaaggtg gaagaagagc aaaaataaaa gagattagat taatagataa taaaaatatt gggagcaagc actgagaccc agaaagtatt agtagcgagc ttctgctttg 540 600 ctaaggaaag ctggggtact tcccactcag gccgcccgg ctagcaagtc cggctcctcc

aagcgtaggt tggtcccggc gccgtctctg ataaacgatg gacgtacgac gagatccaag

ccctaccctt tctggacgcc ttcgtcaagg aagcacaacg catgcatagt ccatctttcc

agectgeteg aaaegteaag aaggacatea teetteeggg eggatggget etgeegeagg

660

720

780

gttcaattct catcccgagt attcctcacc tccaccacca cacggcatac tgggagaatc 840 cggaccgctt cgaccccgac cggtggcgga cggagaaagt caagaatcgg caccgaagcg tgtatgtgcc atttgcagct ggtccgcgca gctgtatcgg attcaacgtg gcgttgcagg 960 aagtaaagat atccttggct gagcttgtct accgctacga gtttgtgaac gccaccaacg 1020 aggggataga gtatgatccg gactttatcg tgattcgccc ggtgaatttc tacgttcggg 1080 ccatteggeg gaeggaatgg eeggetegtt etecetgagg etgeetaeat ttttetegae 1140 tgtaagtaga tetaegttge ggetaggtte tggtettgat atttteagea eetegeacaa 1200 ataaacacaa ttattacaga ttaaaataac agtacattgt agtagccaat attgatccat 1260 tggcaatatc accttgaaaa gaacatttct taaggttatc aaggatgtaa ccacaagcta 1320 aaaatccaca cccagacacc acaatatgcg tttaagccga gctagttcag tccgcaccca 1380 tcgaaatttt actacaggat ttgcaagaat gcagcagacc gttaaggctg ctaggctgca 1440 gcggcagcct cgatgaatag acgctcccat ttcattccta aagtcgcgag caaggtcaca 1500 gcagctgcaa ctatgcagag gatatatgtc cgatcaatgg cggttacaat tgcaccgaga 1560 acttcatttt gtgtagctgt tggcaactcc tgcacaaaag ttgacccggt tcctgagatc 1620 gcgtccacaa tcgtcgaacg tggttcatga gggaggatcc agccgatgcc tatagttaaa 1680 ggatattagc ttataattgc cacgactacg gtaatggctg aaggaattca gcagtaggag 1740 atactcacgc ttcgctgcct cgtttacgaa gacacattgc gacagtacaa gcgcaaacgt 1800 tagtccgttc agctgcgccg ttgtggtaaa tgccacggct gccgggactt tctccggctt 1860 gactttggct tgcgctaccg catggcctag ttgaaggtac atgccagacc ccaacccaat 1920 cagcgagctg tacccatagg tggctccagg accgctgctg ggcttgatgg tatacatgag 1980 aggggacct atcaggcaga acccaccgcc catgatgtac cacggaatat agtaacccag 2040 acggcctgca agatagccac cagagacgca gctgaagacc agaagacaga cgaacggaag 2100 gagteggaeg eeggattgaa gegattegte geetteagtg aactgaaagt acagtgggat 2160 cacatatgtc ggaaccgtca cgcaaacacc agtacagcag ccgcagacga aaagcagcga 2220 gagaagaggt tggcgccacg aaacaagttc cacagggaag agtcgggtct cctccgtcgt 2280 gaggatgcag tatgtctgtt ggattccgaa cacaatgaag aggactccgc caagggtgat 2340 cgcgactata atacccggtt cgctccaggg atacattgca cctgccgaag tttatgccaa 2400

tgactcccgc agcaaaggcg gcaaagagaa tgagcgttcc cactaaatcc atacgcttca 2460 ggcgactgga cacggttgtt cccgcggctg tggcttttag caatggggga gggatatgta 2520 aactgccgca aagaggctag aacatcgccg ctgatttata ccaacgaggt ccaactgtga 2580 gctatcgggg aagcgccgcc aatgatcggc ccagacatgg cctgcaccca acgcaaacca 2640 atgaataacg acatgggacg ttttgcattt tctcaggcgg ggagaagtta ttagcgacta 2700 ctgacaacac gcgtgccgca tgaacgactc aat 2733

- <210> 3096
- <211> 2849
- <212> DNA
- <213> Aspergillus nidulans
- <400> 3096

60 gagcgcagtc gcagtcacaa gtcggctacg gaggtattaa gtgcgcgcga gcggtatctt gcgcgcaaga gggagcgaga agcggcgaag ggctcgtaga gccttcactt tcctttatgt gtcatttttg gggtaatcgt tgtttgcacg aaaggtgttg gagtccattc aaaatataaa gctggcgtct tacagcgaat tccttctatc gagcatatga gttagtctaa actaatgtac ttttatcgtt tccgtgactg cagttctatc gtaagtatga atggtatcgt cactcgttat gcagttgaat cgtgcagtaa ctccagagta acatgcacca agtccaactc ttctgatcca aaatgcaaag cctaacgcca atatactttc aagttgtcaa ggcaaaactc agacccatca 420 agcccatgcc tccaatagca aagccaattg ccatattccg ctgatgtgtt aagactaaac 480 cttcggtgaa taactgcaag cccaccgagg tcattactcc cgctgtaacg gcaaacatgc 540 agccgtagac agcccaggag gtctcattct ggccatcgcc ggcaccacta ccggctttcc 600 gagcacccca gatccagagc gctgccagtc cagcaccggc aggctggctg atgccgccta 660 gaagactgga ccagaacatt gcccatccac gagaatgaat ggcgagatag agcggcaatg ccattgcgaa gccctcactg atgttgtgga tgaagagggc taaaaagact gtcatcccca 780 gtgttgggct tgcgtgatta gtggcgtatg tgataaagcc ctctggtagt ttgtgtaacg ctatggcgac agatgtttgt aaccctatcg aaagaaaagc gttttggggt acgtgatggt ggtgttgggc aacggaaacc ggatgcttag actgcccgtc.cgcttccgct cccattggag gtgacgaggg agcattatcc gccgtttctg tttcagagga ggagctggga gcatctgccg 1020

agageceagg aacetgaatg tetgtateag aggeategte egegetaaeg gegggaegga 1080 taagggtett egtgeatteg teaceaeaag eetgtgagaa accatageae ggaceattet 1140 cgtcgcagta tgccttcgca cctccaatca aggtgtacat tcgtcgtccg agacggacac 1200 gccacggttc gcgacctgta cggacgatgc cgcctggctc acgacccgta cctggaagac 1260 cgattcccgc cggtgtagat ttatgtgaag tcagaagggg agttcgctcg gagagccgtt 1320 tgcgaggacg atgatccaat gcagcgtgcg aaagctttcc tcgatcgagg tcggagtcgt 1380 cgcggggcga cgcttcgtga gtataagcac aatccaccac atgggagggc aggaacttgt 1440 gcagcactgc agagagcccc gggattccaa tgactccagc aataaaaaga ccgatcagag 1500 cgtatgcgga tcgtgaggga gaccaaccgg ctttcatgag gtagtcgcgg gaggtgggga 1560 gcatgctata caacgaggtg aagatctaaa ggtcaccatc agcatttatc aacctttccg 1620 ccccgtaact atcttacaat aactcctgca ctgagacata acgatgcgga aagaaacgaa 1680 ttgtttcgga cgatctggaa atggcttcga ggccagaagt ggcggaggag aagatcaacg 1740 cagatgaccg aagaccccag gacgcaggct ggaccgtcag gtggattgca aatatattgg 1800 actgggaaac ttaccaacac cggacacggc actcatcacc cagccccgaa ggtcgtttga 1860 ggcagccatg agagcggttg atgggtttgg ggaaagcaaa tccagttgga gaagagccgt 1920 tgagaaatga cggagttatt agataagcca gcgttgtgga gttgcggagt atcactatcg 1980 tattagatag aggaacgata ctaataaaca gtagaagagt tatagagatt aactcagaac 2040 gagccggtcc ctgatgagat atccaccca aggcgtgaca ggttgtttat aaggtgtggc 2100 aagtggtgag gaccctggga gtctcttaga gttgggaaga tcttcgcccg ttcgctcgtc 2160 tttctcccct ttgctccatt caattcaaca ctttcattga ttttgattct cgctttgatt 2220 tgtccttgtc tctgacatct aaaacaactc cttgtatgga ttaattgtgt tcttttgaag 2280 gaatagagge ttecaegatg etgetagace egeegetetg accegetget etgaceeget 2340 gcacatgaac tegttacage cagteatete etcacattte aaagcagaeg accatetate 2400 ctacgigtgg cgttgggaat ccttgtaagc agtacttcat tattgcttag cacaagggag 2460 ttattttcta acgtcttgat gaattgcttt gttgtttcca taatttatgt ataggaaagg 2520 ccaaaaattg accaacgcga gtaaacaaca atatgagatc cgttcgatcg aatgtcctcc 2580 accactaggg gaaataataa aaaaaaaaa aaaaatttcg aggaattcta tccagccatt 2640

ttcaatgtac agccatccaa agcttttgag ttattatcct acccctgtcg caaagcaaat 2700 atccaatgcc aaatcggttt tttcattcaa ttttaactcc gggtcccctc caccgcgttt 2760 gaaataaatc ctgtttcttt atgggtgcct ttaaccgttt tgtaacccta ggttttattt 2820 tttattttgg cgcaaccgtt gacttttcc 2849 3097 <210> 576 <211> <212> DNA <213> Aspergillus nidulans <400> 3097 taaacgaacg aagtatcagg tcttggctga tgaattggtg aagaccgatg atcaagtcaa 60 gaagacaggt ggtgcggcag cgcaaaagta aatacctgaa gagtgtcgtt agacgcaaaa ggaaggaaag agaggaagag gcgattctgc aacagacacc agaggggggg ggggatgcac 180 tgacaattaa tgaaaagttc cacccggct acggagtaaa tcgtacgcta ctgtactact ctgtattatc gcctttcatc atttctgtta tggcgcatga tattacgctg gtttaaccac 300 tagacggaga aattcaatta ccactgcaac cacaaatatg cctaaagcgc ttgggcaacg 360 gtttgaggaa tgacagaaag caacagcatg ccattcgcaa tcgtccagta gtcgccggaa 420 gegecactge atceegatte ettegattee teegacteet getecaagee caatgacaac 480 atgagcgaac gggatcagag gatgttgaga cccctggtca ggcctgaacg ataagcaggt 540 576 tcgaggtggt gcggaggctg gaccatccat gtcgac <210> 3098 <211> 3356 <212> DNA <213> Aspergillus nidulans unsure at all n locations <223> <400> 3098 gaaagcagat gtcgagataa gtacaggtcc ccgtgctctg caaccttcgc aatttggaat 60 gatctgccta gcttacactc ttgaaggtga agcctgtggt ctcgtgaaaa atctggctct 120

tatgacacac attacgacca atgatgaaga aggtccaatc aaaaacctta tattcatgct 180

tggtgcagaa gacatccaga ccgtaggtgg aaaggagatc tatgcacctg gcagttatac

tatctcgatt aacggtacgc caatggcgct aacccgtcgc ccgaagtact tcttgaatgc gttccggcga ctgcgacgaa tgggcaggat ctccgagttt gtcagcatct acattaatca 360 tcatcagcgt gctgtgcacg ttgcaactga tgatggacgt atctgccggc cactcattat 420 cgtcgaagat ggcaagtcgc gcgtcaagaa acatcatctc cgcaagctcc gtgatggaac 480 gatgcagttc gatgatttcc tagcccaagg cctagttgaa tatgtggatg tcaacgagga gaacgattcg ttaatcgcca tatacgagaa ggatataacg gacacgacta ctcatatgga 600 aatcgaacct ttcacaattc tcggtgctgt cgccggtctg attccttatc ctcaccacaa 660 ccagtccccg cgtaatactt accaatgtgc tatgggtaaa caagcgattg gggctatcgc 720 gtcgaaccag ttcctgcgta ttgattccat tctttacctg atggtttacc cacagagacc 780 catggttaag tcgcgcacga ttgaattgac caaatacgat cagctacctg ccggccaaaa 840 cgccactgtt gccgtcatga gttactctgg ttacgatatt gaggatgccc tagtcttgaa 900 caagggctca gttgaccgtg gcttcggtcg ctgccaggtg ttccgcaagt atgtcacaaa 960 catgaaaagt tattccacag gcacgaagga catcgtgagc cctaccactt atgagaacaa 1020 agcgcccata aggaaacacg ctctcttaga gaacaaaagt ctggcagccg ttggagaaca 1080 agtcaatgct ggagaggttt acatcaataa gtctacacca gatcagtcaa tgtcctcagg 1140 aatgccaggc tctgatgcag ggcgaccgat cagctacaac cncactccga tgacctacaa 1200 gcttcccgat cctgcctaca ttgacaaagt catgatttcc gctactgaaa acgagaatca 1260 aatcatcaaa gtactcacac gccaaacacg gcggcccgaa gtcggcgaca agttctcttc 1320 gcgtcacggg caaaagggtg ttacaggtat tattgttgac caagccgaca tgcctttcac 1380 ggaccagggt atcaacccag acatcatcat gaacccccac ggtttcccct ctcgtatgac 1440 agteggaaaa atgettgaac ttgttgeagg taaageeggt gttettteeg geeageaegg 1500 ctatggaaca tgctttagcg gcacccctgt cgaacaaatg acccagaccc tcattgacaa 1560 aagetteage taeggtggea aggaetatet taeetetgge ateaeaggeg aageteteee 1620 tttctacgtc ttcacgggac ctatctacta ccagaagctg aagcatatgg ttcaagacaa 1680 gatgcattcg cgtgcgcgcg ggccccgcgc cacactcacc cgccagccaa cagaaggtcg 1740 ttctcgggat ggaggtctgc gtctcggaga gatggagcgt gattgtttaa tcgcttacgg 1800 taccagtcag ctgcttttgg aacggttgat gatatcgtct gatcgccacg aggttgatgt 1860

ctgcgagcag tgcgggttca tgggctacct gaactggtgc cagcgctgca agtcatccag 1920 gagtgttgtg aagatggtca ttccttatgc ggctaagctc cttattcagg agctgatgag 1980 tatgaatgtc acggctagac taaagctcga agacgagttc cccgagacca aggggcgatg 2040 atggacattg tetggetgea ggttatgaaa agtgettgea eattggegtt ggtaetetaa 2100 tgtatatata tgcatagcga atggttagaa tctgtgagat acatgtacgt gcctcttcgg 2160 caaacagcaa atatctcctc atatccccgc atttcgagcc ctcggcccat acaagaacac 2220 acacteteaa taaceeatea acateettee aataaeteae teeeetaaet geeattetea 2280 ataagcaatg tggccacgcc gaaaatgact gaatttcaaa tcccactcga gtacctcacc 2340 tcgatcaagg acaaagtcgt cctcataact ggtgcgtata tacctctgca ccctagctat 2400 tttatctata catatacact gctagcatca atataacatt acccattcac aggaagctcc 2460 tetggeateg geaaageaac egeceacete tgeetgeace atggegeaaa agteatagee 2520 ggcgatctct acccctacc agcggtcttt ctacaaagcc tagaccagcg agacgaacaa 2580 teetgtaegg gageegeate aaceteacea eeacateagg tggatgtgte agaaaatete 2640 atgtttgtcc aaacggacgt ctcagattgg acgagtatcc gcaatctctt catccgcggg 2700 gtggaacgat tcggcgtcat agaccacgtt ttcgcgaatg cggggaatgg accgctgagt 2760 aacttettag aggagaettt tgaagataag gaceggggag aacaggttet ageeecacca 2820 gatctgaaag teetggatgt gaatettatt gggetatttt cacagegtgt etgggtgtta 2880 ctacctttct caacttcctt ctggggaata tgagatcggc atcgaaccct tcttcttgct 2940 ataatcatag ttcatgatcc tgtccaaaat tcttgtcctc taacaccaat tttcaactcc 3000 gttcatttga ttcctgtttg ttcatcactc cacatgatag ccgattcctc tatgttactc 3060 cccatcgctc gtagactccg cttccccata tcattgttat actatacttt cctcttctta 3120 taccgttact ctcattccat ttctttatct cacctttttc tatcgatacc ttatctactt 3180 cttacatect tacttgeett cetaatatte atcattetat acaetteate actgtattte 3240 tatcatctct cttctcatac tagaattagg aagactccta cttatttcca aatcatattc 3300 atctccattt tattaattta tatcttgcac gtctcgtcct cctattctac ctcttc

<210> 3099

<211> 1006

<212> DNA

<213> Aspergillus nidulans <400> 3099 gtcagcaagt ctcgatcgac gccaactttg aattgatggc tggagcttga ccgaataaga 60 aatcaacgaa tttgacaacc ctgaaggccc gctttcaggt ctgtggtgat gattggcttc ccattaaggt ctttttcggt gatgatgaat gactatctga aagcgaccga cctatctaga ctttagaaca atatttgaga taatatgatg caataacgca aatattactg tgctgttggt 240 gaagtatcag tttcagtgca agcgtaaaac taatatatag ttcggtgatc ccttcgacgg 300 tgcgaagcca gacaccaggg atatgtaatt tgacacggga acatggtgct gagcaggcct 360 420 atactactga atatetttee geggetgett aetgeecagg caettacage tettttteae ttactagaag cgataaactg ctcattggtg cgagtattcc ggattcatcc gttgttgcct 480 caggcgcgtg gcgtggtcac atgctgcgcc accctgatgt agtcaccttc agcaccaggc 540 atcettegtt ettteaetta teaaateeat etegattatt agtttgegat teteaeatte 600 ttcctagtct gtgataatcg tcgtcaggat gcctccttca agtgggcacc tgctgcttcc aaagctttgg agagcagcta ggtgagtagt tggccccagc tgtatactct ataccgagag 720 780 ctgacagtct attttgaggt tcgcctacgc gaaggcgtac aaagccgtaa gggcgaaaat accagaaccg gcgcagcagg tttctcttcg tgtccagcca gtatatgcgc ggatcacgcc 840 ccaacaaccc gtcaatcgag ctgctgccat ccgtcaagcc cgcagccgct acttctccac 900 cegegegtea ggecegtttg etteataett caaageggea gteeagggeg acaagaetge 960 1006 cttatagatc atcaagaatt gcgggcaaca tcagccgact tacgag <210> 3100 1481 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 3100 ttggaccccg gaagatcctc gagtacgacg gtcgctacgg ggttctgatc tgccacgagt 120 gccggtatgc gatccagaag agcgcgctgc agagccacct gctgcgccat aagatctacc gtgccgaccg ccagcagctg gtcgctatga ttaatgagct cgatcttctc gagcctgacg 180

atgtgttgct gccgcctccg gagtcacccc cgatcgacgg gctgccggtc atcgcggggt

accgctgtac agccccgggt tgcgctaatc tctgtgcgag tctgaagcgc atgaagggcc 300 attggagaga gagccatggt attgcggatg cgtcactcgc gcgtccagcc aagctacaga 360 ctttctttcg ggggactaag atccgctact ttgaggtgac tcccacgaca gaggatgagg 420 480 acgatgagga aaacgagagc gagaatgacg aggaagaagg ggatgtcgat ttggaagagc 540 aggaagacga caacggtggt cggcagtcaa cgacggtcac aacttctccc ggcccttccg 600 ctccctctgt caacgtggac cttgaaaccc tgtcctactt tcaccatttc atgtcggcaa cgagcctgac attaccatgt ccgcaggata tgcaggcggg ggctcaatac tggaaagaaa 660 aggccgttcc tcaagcgcta caccanaaat gggtagtgtg cgggctgctg gcactcgctg cctgtcactt ggccgcattc caggacaatg cggcggctgg ccacaagcac cgcaaacgag cggctgaatt ctccctcgag tttcgaacgg gatggagaga actggccgac acatctggtg agggtctgcg agaggtagcg accgagattg agtgtttgct acgttgtgca cattgggcat tggctgaatc cccctgcgat caacgcatca tgccagagcc gggcgtacca gagcacctcc 960 agtecateat cagcaccatt cagagtactg ttecegegge egeaceaeae gaagetgaaa 1020 cgtcggccta cgcgacacga attctcagat ggaacacctc agaggccgga aacagcgtcc 1080 ttgcggagat ccggaaccgt cttcatgacc taccagctcg catggccgat acctttggga 1140 gaccggagaa tattcaggac gttcttgtcc tcctgtcagc cctcgcagct atgggtgagt 1200 gctgtgacac gagctttgcg tcggaggaag ttggaccagc gtggtggggg atggcgacct 1260 ggtggacgcg agtgccgctt cgtttcaagg agctggtggc acgccactat ccagcatctc 1320 tegtggtggt egeceattgg geageactga tggteaateg aacegagege tgeggatget 1380 ggctagtcaa ggggttggcc atgacgatct tactacggat cgctgagcga cagccggagg 1440 acgatgacgg aaatgtgcag cggcttgttg cgcttcacta a 1481

<210> 3101

<211> 725

<212> DNA

<213> Aspergillus nidulans

<400> 3101

aaatcgcgct caatcatctc cgcccaattc tgcacgtcgc caatctcctt caacgcgttc 60 cgtccctcat ctgcaacttt ctcccaagcg tcattctgct tacgcaggct ctcagtgtgt 120

cgcgctagct gcgcttcttg gttcttcaaa gcctgggaat tagagtggag gttctgggct 240 cgatcgacga gcgcactggt gtagttttga ccgagggagt gaagagaggc agtgaaggcg 300 gatgttgcga gggtgcgcgg gtcgagtgtg tcagagacgg ggtcttggcc ggtgttggcg ttcgaattcg aggccgaggt cgaggtcgcg gtgggatttt gaggggcgga ttgggggtct 360 gcaattatag cgggcgaggt gggggacatc ttgctttcgg ggtggttcct tgagtaatgt 420 480 agtatactga tcgcaaatgt aggaaagggg attggggaat gacttgataa ggtagggggc tgtttgtgag gtaaactgtt ggtgaagtgt aacaagattg atatattgtg ttggtacacc 540 tcacctcact ttgttggacg accacatgac ttgtttagct gcatatggat gagttgggtt tgtagtcaag tctgatagta cgggttaaca tgaagaacct ctagattata tataaccagc 660 catccgaacc tcatgaattt atatctactt atttaactcc tctgccgcat ccttcacata 720 725 ctccc <210> 3102 <211> 2167 <212> DNA <213> Aspergillus nidulans <400> 3102 ccaaaaaaaa ggcgcttctg ttattgttta agaacaacct ggttcttaat atttaaaatg 60 cgggcaaaga ggcaaatacc taagcactta ttaaaaaaaat tctccatata gtggtatatc 120 accaaagatt cggcttacaa cctaataaac aagggcaccg gctcaaaaac tccaagttaa 180 ataaaaaggt catttacaga aagtcaagat cgcttaaggt gcttgacaga tcaatatgcg 300 tgaacaagac atgcccagga cattccagat gccaataatg ggcagaggta tccaaaagac 360 aattcagcgt gtttgcccag cctccagctg gcttggtgtt cgcggagcat ttagatgtga attgccagga accgtcgtag aatcttgatt tctgactcta aatcggttgc tgaagttaga 420 480 caaccaagac gacagtcgcg ggatggaggt atcatttctc gatcgaccct cttcgatcgt 540 tggagtggtc cgtacggccc ataatctgtg gcctattggg cgagaagttc cggaaacggt

600

660

720

gtctggagca ctctgtgagg cctgtccata tagtgtctgt gctcgaaatg ggttaacccg

gcccctgatc aaaacagctt ggggatgatt tgggcttgcg gcgcgacgac cagaagtaga

tggtaagtcg gaagcgtcag gacgaggctt gggtgtataa taatctgcct tgcacagcgg

gcaggaggct cttcgacttg tcagccatgg gtcaacacat gaggcgttaa aggcgtggcc 780 acaataaaga ccacgtatat catcatcgtc ttcaataaga tcgagacaaa tagcgcacga 840 atctccaggg cttgtatcaa gatccgtaag aacggtggtg ggtatgatat cctcgacggt 900 atgataatca tggtctctga ctactggatt aattcggtcc gagctaactc tgggtgatgc 960 attattegte egggagaaac cetttataet ettetettea gattetggeg ceatgteace 1020 atcatcgaca ggttttgttg gctgctgcga cgttgctgaa ttaagtctct gatgagattt 1080 agcatcaggt gcagtcacga gggatgtagc cccctccgga agggactgtt ggtcatcctc 1140 ggcgtcaaga gcgttctcag tatgggcagc cgttatacca ccagcagttg agagaccagc 1200 atttgcccgt gatgatctcc acactttata cttggtaagc gggaaccgtt cgtttacttc 1260 gtccatagtc atcaatttct tttcccttct tctccgatga gtacgcggca tcgcgaccaa 1320 gtctattggc tctccattgt ctccgccacg gatttggcga ttgcgctggt tataccggaa 1380 gcaatacttc acgccaacta taatcctatt tattgttatc ggtatcagcc gccttcagga 1440 qqataaaqqt attqaqcata ccacaaattt gtaaagacaa ccccgaaacc aagagcaaca 1500 aaaaaaagaa gtggagagct agtgggactt gagcctccgt tatcacctga gccgttgtca 1560 gtaggcgctg gcgaggagct tgttgttgaa gacatctcga tgacaatcag acacgcgggt 1620 tgtacaatgg tcgggaaaac gccgtaagtg ggctaacaag aagatatggg aacttctttc 1680 ttttgtcaaa attgtagttt caaatttccc gcctcgaaag acgggagtac cacgctggaa 1740 acctcaacag aaggtgtcgg gagtcacagt tcaattcatc gagtcgggga gacctaggaa 1800 tgaacacctg acggggcatc actgttagca gcttttattg gagctgcgac ggccctaata 1860 tegecetttt tttttetete ttteggegte tgegtaetgt ttteegttgt tgagtteaga 1920 aagggaagtc gccgcttcca tgggtaatgg cagaaacaga cgagtgagac gtcttgagat 1980 gtctctgatc acgggatgat ccccttatgc caagtctact atccgcggca agggtcccgg 2040 ctcactcact ctttggaccc gccgacagag ccgtttcccc tcgttgggag ttccctaaac 2100caactggctg ggccggaagt gatgacttag acaactttta gtctagaata cagtcaccat 2160 2167 atcgctt

<210> 3103 <211> 1359 <212> DNA

<213> Aspergillus nidulans

<400> 3103

catctaccat ggacgcatct ccccgcaatc agttcagcgg actggtagct gtctcgcagg 60 acteteagea gaggactatg ceaaggteeg agetateagt ttagecattg tggegettae gagetecatg caacteaace teatetgegg ggtetttggg etetgeteat tgetteteea 180 tgaaacagaa cgaatgttgg aaatagagcg atgtcaacga cggacgaatc gccgcattgc 240 cagtggtgca gacaagctca gtttggagcg atttgcactg acactggggc cactcctcat 300 tgatccgcga ggacaaggag gcgacgcagg cgcattccac atgggtcccg acgagattga 360 aagccagcgg gtggtcacgc tcttgattgg gaactggcgc agcatcagtc gacagttgcg 420 480 aatctgggag cggcgtgggc ttgaagagct ggaagggcga gcgcaggcaa ggacacgggc 540 acgcgcaacg agcggcgaaa gcgagaaagc agtagagaga tgccagaaag agtgtatata 600 aattattagg tccaggggat gtggaaatcc atgatcatgg ttgaaggttc ggaataatgc 660 gtcaccgttg gagcttgagc ctgtgcacag accaatctag accggtcggg ccatgcgccg ggcgggggaa ggatcgccac taacgctttg cttaagcagg gaacgggcgc tccgtacatt 720 ggcagcaagc tagatagtct atcgagaata agacgatgga acaggttttg tagcaggtgt gggcactgag gggtctccgg ccctccattc aaggtggcta gtacaggttt gagacggcta tgagcagggt agcgctgcta tagccccacg ctttctagtg aattctggac gtgtccggct 900 ctcctaggag ctcttgcaga tcgagcgctc ttgattgtcg gctgttcttt ccggacctca cttttgagag taatggtacc aatacgggga cttttggagg gttgcccacg taggattatg 1020 tggtacttct agctggacgg gtgcagctgc cacggagtgt gaaccgccaa ttagaggtcg 1080 cctcagcgac cgatgacgtt gcctgttagg aacttcagcc cttgtcagaa agagaagact 1140 ccaagcccag ttctctcaca atgttcctgg actattccat gctgatgatg atgtcaatgc 1200 aacctgaggt actcctgtgg atgccattgg cgagccctgt ttcgcggatt tcccatccgc 1260 aatagtecaa geetgtecag gtecageeca geetaceeeg tateetagte eagttettgt 1320 gttcatatgc cacatctggc cagctctgtc cctcctcgt 1359

<210> 3104 <211> 1050 · <212> DNA <213> Aspergillus nidulans <400> 3104 tgccgaatta ttaaaagcaa cgccttttat tatatcccaa tgggcattat tttaatggtc 60 tgatcttctt gaaaaatact gataagagtc tgaaagtaag cactatggaa ctggttggta attgcttgat aaccactaac aaagtgatta ggaatatatt caagaatatt accaggatgc 180 agagagtact atggttctct gtagttataa taagcagatc tgttaaggga cgtatttaga tggatcttcc tatctagacg tgccgtacgt acaagaagga atcgctaaag aagaaatgag 300 aaagaaggat tgttgttgca aggaagtctt gtaggtggct caccgccttc aggacagcgc 360 aggeettgge egagteacta aggtetaagg teettgtata ggeaaaggae ecataacaee 420 actaaggage tttatagtea ggtaaaaact taccetggtg tgtattatat tattetgeag 480 cataaccatt tatacaagca gtatatagat aagtacagag caagatagta ttagagtcca 540 atcagagtag cttgtatact atgaaaagta ttagaagctg aggaagctct actgcaaatc 600 ttcaagcttg gaaataatag cagacgccta aattttactt ctcacctttc tcaaccgcac 660 teggeetatg teacaggeta tggeetggag ettggttgte ggeeatgeee teaacetagt 720 tctagataag gtttctgcaa catcagtata cagcctcgga attgcagcct cgtagcttag 780 gaaaagatat ccgtcggcat gtaggtccgg cggtatacag gtaagggaag tcaggagtct 840 tgacgtatga ttaggaaagg ttgataaagg gaggaagata tctgcacttc tatgtcttgt 900 ttccttcttt aagcatgtga tactcgtgaa tacaggacag ccagttgaaa acaatactgc 960 ctacactcgt tacagcctat acttagcttg tatcacctct aaaaccaaca ccatcagggc 1020 ttgttgcact tcaattatga tagcagtcaa 1050 <210> 3105 <211> 2392 <212> DNA <213> Aspergillus nidulans 3105 <400>

taatggttct actgaatggt gtttcgcttg tattgcgcct tttatactgg tggtttttt 60
ggggttgctt aggggcttgt tttccagttg ccccttcgtt tttttacgat tgttctgggt 120
tgaatcctgg tgctaacact attcaatatg aatataggct ctatcgtgcg ttgtacgttg 180

taggttccgt gcctccatgg cttggtagat acgtgttcgt aataggtaga atatacgtcg aatcaaacac atggattgtt ctcattataa ctccaggata tataactttt ttgtagcccc agtectaaat aettetagat gaaaegeeag geacatgeat tacagattee gteaaatgta 360 caagagtaga aaagacctca cctctcgcat caagcgatgc tggaaaagac acgcttctta 420 ccagttcccg ttgttcgctg ctcttcctcc caagcctgct catcaatgta atcctttgta 480 ccatgagett tgacetgete gecaaegaae tgeaatgeag agagattgaa geceattteg 600 tecttetgge gegtaageae eegaegaaga gatgagegaa taetgteaag catgggeege atcagcttgc tggcaacgat ctggcggtga tgcgttttaa gcatgaagaa cagcacgcgg 660 catgtaagag gaacattcca ctccctgcta gcccaaatat ttaagaaggt aaatagggca gggattttcg agaaggggag gacaagaagg gcgtcctgca gggcggccgg ggggatcttt tgcacgacgt tgagcaggtg ttgctcggcg gagatgttgt taagggccat gtacagtggg ttgcgggcgg gaggtgcagc gttcgggttc ttcgccttta tgacgcgcca ctcgcgcatg acttcgagat cctccattcc cagatcgagc gcttccatga tcttctcccc ggccatgagg gtgteggttg tetgttteee ggeateeaeg getteggeet tttegeegte ggegeeget 1020 tettettett caagggagge tgegaggttg ttgtegtaaa tetettegag eteetttet 1080 cgttcttctt caaggaatag ttgctcatca gtttgttccc atgtgcggat actcttgtcg 1140 tgactggcgg tgacaatgaa ctcgccggtg tggctgattg ccatcgccca gatctcgcca 1200 tggtggccag acagcttctg gatgtgttcg aatttatcgc cgtcccagta cttgatgacg 1260 cggtctttgc tgacgctgaa gaagttgtga ccgttgcctt cgttgttgct gggcacgaaa 1320 gccacggcca taatgctgtc ttcgtgcgcg aggaatgact tatgacagtc accaaagtcc 1380 agaccccaca agcggactgt cttgtcagct gaacatgtga cgataagttt gctgtcccaa 1440 gagatatcca tgtttagaac gggtagttta tggccataga ggttcaagaa aagcttcagc 1500 gaatcgttga agaacacttt gacggtattg tcgagaagtg caactgccag caggcgagca 1560 tegggtgaaa aceggacaet caggatatea tetgagaeet teagtgteet egtatgaace 1620 aacctcaacc geggtgttgt cegtttggta ccaggaatct cetectgcac gacetggaaa 1680 ttccagaact tcgcggactt atctgcgctg ccactaacta acgatttgcc gtcgggatgc 1740 acctgcaaag accatacggg cccgtcatgt gctttgatcg tatctagtag tgttgacgag 1800

gcaatgtcga agatttccag ctccccgtcc ttgttgccaa ccacgacaat cttgtcaccc 1860 ggaaggaaag ccgaacatag tgcataacca cattctagag ttcgcaagca gttttgtgtc 1920 cgaacattcc agaccttgag actcccgttg gaggcagaag ccagcattcg gtcatccgaa 1980 ctcaaggcga cggatctaat atctgtgcga tggcctggta tatcgatagc cagcgttcgg 2040 ttgtactcca catcaccctc gctcttgctc ttcttattca acgtggtcac gctgtaggcc 2100 tccaattgat tgttcgtagt agcagcaagg agttgaatct ttccgctcga tttgtcctat 2160 ccategaaga ectaectaec geegtetgae ategttgaga ecaagaetea gtacaggaeg 2220 gcgaacatat ctcgcctacg tctagttctc gcgctgccgt ttgcgacctg gctctctctt 2280 ttgtggctct gcaactttgc tgggtaacgg gcccatttac cctttgctga gcctatgtgg 2340 gggagttcat ctaactctgg ggaagccata aaaccgattc acggtttgga ta 2392

<210> 3106 659

<211>

<212> DNA

<213> Aspergillus nidulans

<400> 3106

accggaaaaa tagttggggc cctccaagcc ctccagtatc cgaatacgtg gagaaatcag 60 cgatccgtta tcatatcaaa ggcaccaaat acatcttcga aattgcaagg tatgatgagt acaagegtte aggggeggt geetactgtg gggagataaa ttgetgggaa aettgteaga 180 aacteettgt acattetggg ggeatetgtt tegatgeaaa ttgggaeaac etgeteggeg 240 gccatgcaaa tctaccaaaa gggcaatccg cgaagtacag cctgaatcta gccacgttct 300 tecegteeaa ggaacetttg etgteeetga aaaceagage aaaggettet gggagtttat 360 tgacctagta agacaagcag cggaacttct gggcccgaca caggcctccc agaagatgcc 420 aaaatgaatg ccgtatccga gaccaggccg taaaacagga agctagtctg gcggtctcac 480 ctgcagcacc tgcactaaac cctgcgcaga gccctcggat gctgaacgaa gatcttggta 540 cactgtttta aacaattgaa catggctata tttcgaggta gcctagcgga ctaggaagcg 600 gagtcgagtc ctaaatttag gcctatgtta catttttcag ccagatcagt cattactgc 659

3107 <210>

<211> 1457

<212>	DNA
<213>	Aspergillus nidulans
<223> <400>	unsure at all n locations 3107

ttttgtccct cgttggtcgg tgttgggtgt gtttccctgg ggtttgtgtt gggggcqtcc cttggtgggg gccggggctt ggtctttctt gccctgcgga tgtttgcgcg tgttgcttgg cttttggcat ttttgtgggg tgtcgccttc cttgccttgg cttcgtctcc ggctgccctt ttttggcggg cggggtcggt gcgccgggtt ccctgttgtt ttggttgtct gtgtctccct 300 teteggetge gattgettgg tettggtgte gtegggteeg tgggtggtee etectgtgte 360 gcggggcgcc aggtctggct tctctttggt gggtcctcta aaatcgactg ccacatgggg 420 acaccctaaa ctgctctttc agagccctag tagccgcttt tcctttgtag ttgccagcaa 480 caatgaccgg cccggcccgg cattcccgta ggcatcaacg ggccagctca ggcgactgtc 540 600 tgtcttcgcg tcatgggacc cgcaagatgc gaaggagtgc gatttctaag caggttgtct agagagtgtt aacacttgcg attagactgg cggagatcca gcttactgcg cattgtggca tctgctgaga aacgacttca gttgccagta aagcaacagc caaaggctcc aattgctagc 720 ccatctcatc ctgaaagagc atgatccgtc aagaattcaa gagttgggaa ataggacaga 780 caaaaagacc cttggacgac cttcacttgt ccattccata gaactcttat ccaacacgcg caactacaca gegeeeteag cataatttee aacaceetgt tagttegtee aeggegeaga ggcatcactt ttacgaaata cctgttggat accaggaata ccgttctaac agataacgca 960 aaagttttgc cggcagcaaa accacagccc taacgttctc gggcatattc taccatatcc 1020 teegeacace tegegtetae aegaagetee aageegagat egaegeeget gegteeteag 1080 gtcaattaag caccccgcac atcgcgtaca ccgaagccgt caaattgccg tacctcgtcg 1140 cctgtgtaaa agaggggatg cgcatgcacc cggtcatagg cgtctcgttc ccgcgccatg 1200 caccggccca aggctgttca atcggggggt actatatccc cgagaatgcg cgaattggag 1260 tataccccgc tgtaattcat tttgataaga atatttacgg ngatgatgtg gatgtgttag 1320 gcccgagcgg taggttgagg ccaacgcaga tgaggagagg tcgatgaatg ggtgtattat 1380 gcagtttggg atggggccca gacttgtctg ggaaagatgt gagtgtcgtt ttctttccat 1440

<210> <211> <212> <213>	3108 779 DNA Aspergillus	s nidulans	·			
<400>	3108					
taacggagct	gtacatctgc	cgtggcagtg	aggaatgtat	ggaaatctgg	gttcttggtt	60
gacttgggca	ttacaagcat	gattactgcc	ttgtcagggg	gctggtagct	ctcccacaac	120
acatataaga	tgcccagggc	ctgatagtat	atcatcaggt	ccacacacag	taacagcaga	180
ggcactacta	taatcatgca	tccccctgga	gccacataca	caggcaatat	aaacagcata	240
ctcttgctac	tacctatagg	catgattaca	actacaggac	tggcactgtc	ctggattacc	300
tttagtactg	gtacctgtac	cctgcacaac	tacagcacag	gccatcctat	catgcactgc	360
aatacctgta	ccatatctat	ctaggccagc	tactattact	attactccta	ataattaaca	420
gcctactatt	cggacaggtt	ggcatgcatg	cccagggctg	tgttgactgg	ccgcgggtgg	480
gggaacgcta	gacagcaagg	ctcgtacatg	cttgattctt	gtaaccacag	gcagcacaga	540
atggtgctgc	caccaggttg	gctgttatag	cgcccatgta	ctatcactgt	tacatggggc	600
gagtgccctg	cctgatgatc	tacaatagca	cctatctaac	caaggtcctc	ggctgcctcc	660
agggcaggca	ttacctggtt	gtgcttggac	tatatcttgt	tcacgaacat	acttagcatg	720
tacaggaata	gacagctaat	gctattggac	atactgagat	acggggtaat	atcaagcag	779
<210> <211> <212> <213>	3109 1648 DNA Aspergillus	s nidulans				
<400>	3109			· · ·		
taatggcctt	ctctccttct	ccctctccct	attcaacatg	cagcgagctc	tttcttcccg	60
gacttcggtc	ctctctgccg	cttccaagcg	cgccgctttc	accaagcctg	ctggtctgaa	120
ccttcagcag	cagcgatttg	ctcacaaggt	aagctggata	ccaattgcga	ttcaaaagag	180
gccctaggag	ctttcggcca	gccttccgca	gctctccgga	tagctccagc	aaaattgcta	240

acaactgggc aggaactcaa gttcggcgtt gaagctcgcg ctcagctcct taagggtgtc 300

gacaccettg caaaqqetgt cacatetact ettgqteeca agggtegeaa tqtettqate gaateeect aeggeteece caagateace aagggtaegt tegegettta gteateattt 420 ttacctctat ccctttacac aaccctgtca aaagttgtca ttacattcac taatttqctt 480 agatggtgtt actgttgcca aggccgtcca gctccaggat tagctcgaga acctcggagc 540 tcatgttcta caggatgtct cttacaagac caacgaactc gttgatgacg gtacagccac 600 cgataccgct gttgaccgcg ctatcttttc cgagaccgct aacaacgtcg ctgctggctg 660 caaccccatg gatctgcgcc gcggtatcca agctgctgtc gaagccgctg tcgattacct 720 ccagcagaac aagcgtgata ttactactgg agaggagatt gctcaggtcg ctaccatctc 780 tgctaacggt gacacccacg tcggcaagct tatctcctct gccatggagc gcgtcggcaa 840 ggagggtgtt atcactgtca aggagggcaa gacccttgag gacgagcttg aggttactga 900 gggtatgcgt ttcgaccgtg gttacacctc cccctacttc atcaccgacg ccaaggctca 960 gaaggttgag ttcgagaagc ctctgattct cctttccgag aagaagatct ctgctgttca 1020 ggacatcatc cetgecettg aggetteeac eacteteege egecetetgg ttateatege 1080 tgaggacatt gagggtgagg ctcttgccgt ctgcatcctg aacaagctcc gtggccagct 1140 ccaggttgct gcagtcaagg cccccggctt cggtgacaac cgcaagagca tcctcggtga 1200 cctcggtgtc ctcaccaacg gtaccgtctt cactgacgag cttgacatca agcttgagaa 1260 geteaceece gaeatgeteg getecaetgg ttecateace ateaceaagg aggaeactat 1320 catcctgaac ggtgagggca gcaaggacgc catcgctcag cgttgcgagc agatccgtgg 1380 cgtcatggcc gaccctacca cctccgagta cgagaaggag aagctccaag agcgtctcgc 1440 caagetetet ggeggtgttg etgteattaa ggteggtggt getteegaag tegaggtegg 1500 tgagaagaag gaccgtgtcg ttgatgctct caacgccacc cgtgcggccg tcgaggaggg 1560 tateetteee ggeggtggte eegeteteeg caaggeaaca egeegatgge eeteeeeaa 1620 1648 gcgtcctggg actattgtgg gaccggcc

<sup>&</sup>lt;210> 3110 <211> 948 <212> DNA <213> Aspergillus nidulans <400> 3110

60 gatacgagag attectittt gtcgacgggg ggggccctga ccacctgggg tgcatcctct ccctaccagg cgggtttttt caagataaag ccatggtaaa gtgagggggg gaatgttata 120 tcacctgggg gggaaactca aacgtccttc acaaataaac gtgagagtga gtaacgtggc 180 aaccaagccc tatccaggga ctgggcagaa cattatgttt ggattcacat ggtttacgcg 240 tacggacgtt tttaaaattt tcagaattgt ttcatcttag tgaatatttc ttcatatata 300 aatggcagaa attgtttact actggcaaat agggtcaaat aaaacaaggc aagacagcaa agagacacca ctqttcaggc tttcattgcc qtaqcqacaq caqtqagaca ttacqtqaaq 420 agtgaaagat tectaetett tteteteeat etgeatttet etataacaca accattettt 480 tacctttccc ttcaatccca tcctttgata gaaccttatc accttcatca aaccaatatc 540 cccgtcaacc aataatccat accgaagcca gagcgctatg ataaggcgca acaccttttg ttcttctgat cttccgtcca tcgcccgcaa gctcgacctc tttttccaga tcgtccgccc 660 ccatccaagc ctgtctgagc tgccgaaatc cccgatatgt tggacgccgc tgcgagctcg 720 780 cgcgtacagt gctggaacaa tgacttcgtc tgagttcggg ccggagctgg gcgatattgt ggaggagtac gtgctaccgc aggttgatgg gactgtagcg agacggaaag tgaagaggat 840 ggagaagtcg aggaagaaaa agaagaagag aaggaggagg agggacgaac agaaagagag 900 948 ttctgctttg gaggatgata actcaaatgt tcccccggaa agggaaat

<210> 3111 <211> 1019

<212> DNA

<213> Aspergillus nidulans

<400> 3111

gaattaaccc tcacaaaggg acccttgaac tgttcatggt ggatggggga tcaaggcttg 60
agagacaagg aagcttgaat gagaggtttc cagaggttat acctgtctcg gttaggaatg 120
taataggggc ttggaaggac gaactgtcgg gatgatcctg tctggagggc actcgaacag 180
tatattgtga tttttatca attaccatac tgctagaggg tcaatattga agcaatatga 240
tagcatgagg atgttatgct agcgatatga acactagaag acttgaagag attaagtacg 300
ctcaagggcg tcgtattcaa gaccaatagc acgataatca tgtcaagccc agggcgacct 360
tgctcttcct ggcctagcga acgaatcctt cgatttggaa ttgccagact gggttaacct 420

aaacggcctg gttaggtgct aagccaggta cgttgatctt gctgctgcct tcgacgtaac agacacgaca gttctgtcta tctggccttc ggaccgtaac agaacagaat aatgaattaa 540 aataagataa aaaattggaa aaactcaatc ctgacctgtg gagttcgctt cggcatacta 600 660 tegeaeatgt caactgeeaa ggeegtteea gtgagatgtg aaatgaggae eggeteatee aatgagtaac tegtatagtg aagetaaaga tgeaceatga eteegeeget aaaeteagtt 720 caggaaccaa acacgagccc gatttgaatc agtttgaggg tcagggtccc tggggaactt 780 cgggtgtttg cagccgacaa acaggctgag tcgtgctggc ctggcttcga cctgcatctt 840 ccccctgaga tcccagtctg ctcgtcttga ttgagcttca aactgcgagc cgcgagctgg 900 agacaagttc agaaatgcgt acattggtcc gactccttct ctgcacaggg gttgcgagca 960 ctgcgctctc acagtcccaa ggggagagct tcgaatcttg.aggggcctac ctcagcgaa

<210> 3112

<211> 998

<212> DNA

<213> Aspergillus nidulans

<400> 3112

gactcactat agggatcgct attgtcgtcc tgacaagcct cataatcaat catgttggcc 60 tttttatcgg cctcggcctt atcctccgta tcttcatcct cttcatcctc ttcatcctcg 120 tecteetegt ecteeteate ttettegtet tegtettett egtteeette teceteeggg 180 tctgcgtcac ccgcaccctc atcctccgat ccagatagtt caaaatcaat atcctcctca 240 tegteeteat ceteacegtt egeettttta getgeegete gtteetgttt tgeaattgee 300 360 teacetteet gtettgettt eteaacaaga ttetetacet egtetteaaa tgeagegege tcagcggctg tctcaatgac aataccctta gctcgaagct cctctatcct ttccatccgt tetttegetg ettgtagtet egettgatae aacaaacteg etgatagete tgetgggtte 480 ategeegtag actteegggt gggegaegta agetgegeea gegettteag etttgaatat 540 600 agatgctggc tcctgcactt tccgtactgg aagattctca aatgctgcaa tactccggca tttggccggt gacgtgacga tttttgggtc actattggtg tcatccttct ggtgccgagc 660 tacctgttcc gggtgagtct aaccctcact ggggcctttc taagggctcc cccttcttgc 720 cactgttatt taaccatttg cttgtccttt tgttcttttc tcaaatattc cttgatactt 780

tgtcactgct cctatggtct tcacaactgt ttcatttctt ttcctcttac ttttgtttca atatetteat ttetteettt eteateteta teteteattt etttteetet etettttte 900 teettgacat tteetattta tattacteee eettetaeet teecatetet eeceetegte 960 accttcttac tatttctcta tcttatacca tatcttaa 998

60

<210> 3113 <211> 1696 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 3113

caggacaaat ctttgcggtc agaagttata caggagggtc tgaaagcgct tgctgctttt cctggattga aagaactcgc cctgcagtga atgttcaacg ttaacgaggc aggtcccgag 120 gctgtcgcaa acaggaacaa gatcctgtct cggttgaagt ccctccggtt gaatatcacc 180 aataggagtc gatggattaa tgggagctcg gattatgaag tctgtctcct taccacctgg 240 cacctagege gtgcacaegg egaactaaet gegaetgget gagacagaga eeggaaeege 300 acaagttett ceeegaactg ceeteegtet ggetagaace atgeatgtee aatetteage 360 accteaccet ctactecage atttacateg getteaccee gaaatgegae ettgggggee 420 ttcatttccc taagctgaag accettgcat ttggaaacca cgcctttatc cacgactccc 480 agettgactg gatectttee catgetgega cectaacage actetacete gatgactgea ccataatcta cqaaqccqcq qttaqctcqt attcaqttca aqaqqqccqq acqcttctta catttgatgc cttccgccct catccacact taccagaaaa taaactatac acgtcctatg 660 atacgcgttg ggctgattat ttccgagcat ttaaggataa gttggtacat ctgaaggatt 720 ttegttaegg gagtgeacea aactggtggg aggatgagae cactecettt gagteggage 780 agaagatcag gattgggttt ggaaaagaaa gctatctcac ctttgcctct gggattttac 840 cttgtgaata tatggagcat ttctactggt ggatccgcac gaagcgtgcc gttgtaactg 900 cgaactggag ggattacctt gaatatgttc atggaggaaa gttggaggtt tcggaggatg ataagaaggc cttagaggag ctatgcaaga aagtcgggtt atcgtggagt gtctcttctt 1020 cggaagataa atagtatgat atcgatgggt cggcggaagt caaatgtggt agggacgaaa 1080 gaaagatgaa caagaactgg gacattctaa ctgggtatac tgaaatgcga aacgctaatc 1140

actcaaaaga taaacccaaa cgccggtatg ccagcagaat tccagagggg ccatattaat 1200 ccctttttt ccaacatcag cctcgaagag cattctttt ctttaaccg caccacctcg 1260 gggcttggtt gctttccttc acacacccta aacccttgtt cccattgaaa cggctacgac 1320 ttttttgggc ttnaattcgg ttttaccaga ccctcctttt tccagaaaaaa ttatttttc 1380 cttgacccga aaattggtat tgcaaatttt atgccccaaa tataaccccg aaatacacgg 1440 gtaaacccac aaaagggcct ttcccgagaa cccctggcac aggaactttt ggacaaggtt 1500 ccccctgccc ccccgcgga tgggagtggg ggacccaaaa tttttaaaa ccccactagg 1560 cttgaaccac cgggagtcgc tataagggcc aaaacaattt ctccccccg ggtgttttt 1620 tattttcccc ctcctctt attcttatt ttagtttgac cttgttttg ggtgcttcgg 1680 gggggggggg gggggt

- <210> 3114 <211> 1465 <212> DNA <213> Aspergillus nidulans
- <223> unsure at all n locations <400> 3114

ccacgtcgag acgaagaccg cactttagat atgagcgact ggtacagttt ctacctagtc 60 cctgcgcggc gcactgcgac acaaacactt tccagcctgg gccgtacccg cagaacaata 180 tctcctctgg agattacgag ggtgagatcc agatgctttg tcagtggccg aagcgtccgc 240 tctggaagaa cggcagcgac agctttagct gtgtggatga caaggagtcg atagagagct 300 ggacctacga cttccctgcc ttcaagatcc cagtctacta gacgggtgct gtctgctggt agccactgct cctttccagg gcttgtttca gtctacttcc ctgtgtacag tatacccagt 420 tttttttctct tcttcgacta ttatttattc taggtagtta gctggctgat actgcctcct 480 catgctgatt ccagtctata atgtagctca atcttatcag ctgtggaagt tctaattgca 540 ttacatcgcc tcaccagaca gtaattgtaa tggctagccc aggaggcgaa atatctttaa 600 gagcatactc cattaatgtt actgtaaagg acacgcccc cgatcagggt cctcgggcgc 660 gtgctgcgtg ataataacca caccgacagc ggccctgtac cccttaccqc tqtqtcctca 720

tccgtcccat agcacgtcaa gtacctgact tatgcgttcg caggtttggg tctatgggac 780 tccagatggg aggctgatta tctactcgcg taaacccgcc ctgaccgctg ctaggagccc 840 tcagcaaaaa taacggaaac agacaatagg ttccaccttt gctaggtata gcaaataagg 900 cataacattc atattattgt cattcaattt gtctttaagg gccttgtact cgaattataa 960 tgggctatct gcgctgcgcc gcgtcttgtt ccctctcgtc gagtagaccc tgcttactac 1020 attgtaactt ctcctttatg cggatttcaa ccctattttg tcgttagttg gggtgaatat 1080 ctggggaatg agggatttgg tttcctatat aatgtctatt cttctaaatc tctttttgtt 1140 atacttccag ctgcttgtgt tatagctaca gctataccaa ggcaaagcat tcaatcagat 1200 ctagcagcaa taaaatcgag gctatacttc cacattgctc ctccttccaa agagatgcag 1260 ttccttttga ttgactctac tttctgacgc gacttgtagt cttgttctag ggttatgata 1320 gctgttatta tgaagtttct cgttctttgt ctttgtactg aattgactna ctactctagg 1380 cctaccttaa agggttttga taaatggact atcatttttc ttcccatact aatgatgcta 1440 gataaaattc catatgatgt tttcc 1465

<210> 3115 <211> 1655 <212> DNA

<213> Aspergillus nidulans

<400> 3115

tagattcatt ttcatcattg caacggtggt cttatattat gagcagtttt tagaccatgg 60 gtgcaaaaat ggatgaaggt atgagtcttt taacgaatct atgatatcta gaggtgtgtt 120 ttactgatat gttttcagac tgcacgggaa cgacgcacat atatcccggt ttctgtcagt 180 cctcgacttt gaacctgttt cgctacacca aacgctctat atgtatatag tcgcaggcga 240 taaatatata tggcaatcgg tgcggagata ccctggttat ttaagattca ttcttaagag 300 tacgtacttg ctgggttgcc aaactgctgg cctgcgagcg agaattcctc gaatcagctt 360 aagggacatc gaaagctatc ccctgggtca aatagaggaa agttacggga agtcgcttga 420 gcagtactca tetgcagcat etacaggeca tgeetgeeeg agtagcacaa eeegtetett 480 cctcccgcaa gagctatacc gctatcaaat tcccgaaaac tgcctaagtt ctcattggaa 540 tgagattcag ccgagctatt ataggccaga tgcagcatac aagatatgag tccattgctg

ttatcactag ctggacgctg cccgcatgca ttcgatatac cttatcacct gtgtgccaag 660 accagacgca ttccagccag tggcaagccc tcagtgactg ctgctcccga ctgttccatg 720 ggttccggcg ggaaataaaa ggattgagtt gcaataccag tcaaacagga ttcaagccct 780 ggagagcctg cggtcgattc gttgaaggtt gaaagtggcc accaaatcct tctccgcttt 840 tecaeegeeg tegteataaa agatetgeee egtegtteaa gteegetett ggttteaete 900 tcatcgaaac cattcgcttc gtactacttt atcgccgcat tacacaggca acccgttaat tccatgtcgc atgctattat atcacaactc cgcatttgac catttttgac cagaggtccc 1020 atcgtccagt gtcgaactat cgtattgtgc acccaaaacg tgtgaagaga aattgaagat 1080 aacagagggt tcgagcgagc catcaatcaa caaatcaaga tagcatccta aagacagaat 1140 aggtgggate ttgacactgg cactgtggag ggettgttgt aagagaettg gaagatteca 1200 ccgaagatgt cattaacccg ccaggaaaga aatactactt cggccgatga atcaaaattc 1260 ccaactacac agctattett tetaggtata tttacetttt cegettaegt ggggataaat 1320 tactgacttt ttcgcttccg aacagcaata tgccgagtcg cagagcccat agcggtcacg 1380 tegeegetga tittegegit tgegatggie aaggatitti atatgggega gggeagegag 1440 gcatcattct acgctggaat ccttgtcgcc acatttatcc tagtggaggt cctctctaga 1500 aacteettga tegetatate tgagtgtgag eggaggaage ceagaatgat eeetetggtg 1560 acgctaccat catgtcgatg ttagtgtacg gtttgctccg actactgggt gaccttgttg 1620 tgggggactg gagggttgtt aatggcatca taacc 1655

<210> 3116 <211> 950

<212> DNA

<213> Aspergillus nidulans

<400> 3116

atagaataga cgaaggctcg ccaggaatta gaagattaag ttaagtaata atataaaat 60 attagataag ataggtcttt actagggtta aaatgacttt attcctgcta gtactcctta 120 tataattagc taatattaat tacttatctt agatagctat agaagctatc taatacctta 180 atttaacaag ttctataaga ataatagtat aatatctctt tatatgcctg ctggtttatc 240 ttatctatta taattattag atattggctg gtttggtctg ctaaagtata tatatagagg 300

tottattaaa toaagattat aoottagoaa atactatatt aataagtttg aotttttaga 360 ggcctatccc ctgtatatat taaaatattt ttaataagaa aaatatttaq agcagctttq 420 ctgctacagg gatagagcta tataatctag ataagattct tagtaaactt tatatattac 480 tttttatatt atctcccccc ctggtatcaa gcaggggttc tagtatattt actatattct 540 atatagttta ataactatac taaaagactc tattacttta gaattctata gagagggcct 600 ctaagatact tattaaggat attaataact atatagagca gttataaaaa ggctttaaag 660 ttgctttata taataaggaa tttcttgctt ataaaaacca acttctatac ttagaaagta 720 taaagaagag gcttaaaagg taataatcta ggtaccagat aatacctaat aaaggtatct 780 tagtataaga ggcaagagat ctgatattat agagaaataa gtatctaaat actaaaaatc 840 cctctcctga tagatctact ctagagtctt tgtctatact aagataatat ctactaatat 900 attctaatat aatacttcag tcatagaaga actcatatcc tgtcctagtt 950

- <210> 3117
- <211> 1012
- <212> DNA
- <213> Aspergillus nidulans

<400> 3117

tggccaaggg tgctccattc agacagtgtc attaagaagg gctatcattg tcaatttggc 60 acaccagttt ggtacatcta tcttatcgag aataatgctc aagagctcta ctgagacttt 120 ctattgcaga cctcatagcg acattacttg tcaaaagtct cgaacaatcg gctgataaaa 180 tttatatcca acatgctccg atgaggagtc aggaaggtat aattcatgta ttctatcata 240 aataageget egetaatatt geaaageaaa eacteaagee attettettg eegeaggeta 300 tctacatcgc cttaaccgag atgaagtgaa gagcattgga catacaagtg tcttcctcaa 360 egetgtatee aacegettag cagegacete cacaegggee egetteeteg gaatgateat 420 tggcactgcg atctcgcagc ttattgagga acccggtaaa gcaatcaaat ttgatctcga 480 agagatggag ggcgatgagg ctacatggta cttgagtctt gttaattcta gcgacaaaat 540 tgggtctctg gactccatta gattgccaaa aagtatgtct aacaagcctg gaccgactgc 600 agtcagggcc gaagcgcgca caagcactac acgtcctctt gggaagtcta accaacgtac 660 aacaaaaatt gtggcagttg aagagataga caattcggat gaggagggtg aagacgagga

tgctgatttg	ataccttatg	aaaaacctga	cgaagatccg	gctgatgagg	acgacgaccc	780
aacgcttctg	cagcggaata	aaccggctgc	gccagtgtaa	gtctacttat	ttcaagttga	840
ccagaccatc	taatcattga	taggtacatc	cgcgacctta	taatatacct	tcgggacaca	900
gagaacctag	accgttacga	acttgccctc	gaacagcccc	agaactaatc	agacgtaagg	960
ccggttttgg	tacaagttcg	ccaacacaca	gaaaattggg	tctcggctcg	tc	1012
<210> <211> <212> <213> <400>	3118 578 DNA Aspergillus 3118	s nidulans				
ctcgttgatt	cgcaatcaca	tatcgccgcc	cattttcaag	aaggcggact	cggtatgagt	60
ggtgcctccc	tccagacgat	ccggccatcc	aacggggcga	tacctggtcc	tgcaggacat	120
catgacgcga	attatcgtca	ccaacgatgt	ccacaaaggg	ccgacacgag	tcatcagtat	180
cgaaaacact	gctggcggca	gtgtagtgcc	tcttgctgag	ctgcgccgga	tccgcgagtg	240
ggctgatcgc	aaccgcgtcg	cggtccatat	ggatggtgct	cgattatggg	aggccgtagc	300
cacggggcgg	ggcagcctgt	ctgagtattg	tacgctctgc	gacttggtct	ccctggactt	360
tagcaggaat	ctcggtgcgc	ccatgggcgc	aatggtgctt	gggtcaaccc	agctcatagc	420
ccggctgcgg	cgaatacgca	agagcattgg	tggtgccctc	aagcaatccg	gtcctatcgc	480
cgcagccgcg	cagtttgcct	ttatggagca	gtttgggctg	gggccctggg	gaagtcaagg	540
aaagctacgt	gccgttcatt	tgcttgcgaa	gcaggtgg			578
<210> <211> <212> <213>	3119 3072 DNA Aspergillus	s nidulans .				
<223> <400>	unsure at a	ill n locati	ons			
acttcatcca	ccatctggtc	gttggcggcc	agcttggtct	tatattcttc	aatcgccttc	60
ctggcggttg	cgatctggga	ctccagctgc	gcgaccttca	tctcgcgagc	gtcatatttc	120
tccttcagct	tgcgctctcg	cgcttgcagc	ttctgaaaac	tctgggcgtc	gacctccttt	180
tgagcgtctc	ttagaaccgc	ttcgccagtg	agatccatcg	cggcgcgcag	ctcgttggct	240

gtcgtctgcc acttttgcgc gtcgttgaag agctccaggt tggagctgtc gagctccttg acctggtcct caagecgttg gttctcgage aatateteat geagtegeet gteagtgtta gttgagtcat gatatttacg caggtacaag ttcttgagca acttgatggc catctcctcc 420 gateegeeac teetgaecaa tatgeegagt tgetgetega ttegtteacg etegaattet 480 gtatcatggt ctaatgttag tcctctgtcg tattcttgcg gatcaggggt cctctcgggt 540 gttgggagct gcaaggttgc tgactccgct tcagactgct caatctcctg agggctgtgg 600 attaatccgc ttccagaaat catccttaag gctgcgtaaa tgtcagtttg agtgtcttgg 660 taggtgtaat agatgccagt gaatgagcag gtggtaatcc gctagaagta cggataactg 720 ctgaattctg tgccgtaggc aattgttcgg atagagctat gctgggtgag aacggagcaa aacacaaggg gatttgtttc tttaagtagt attcccgctg agactcgcct cttcgtcctg 840 gacaatagtt tttatccctc gagaatgaaa ccatccttca tctcaccctt ccctttcagc aggagacgta gtacacactt tcagcgtcta cctaagtggc tttctatgaa cctttgttgg 960 catctttatt ctgctnctgg gtgctttagg ctcgctcagc ctttggtcta ttgtacttta 1020 gttggtcgca atcaatatct gaacttacgg cttttatttc aaggcttgtg cctgaattat 1080 tgcttgtcta gtgaccttga gtaatgagat cagagcccat caatgctatg ccagatcttt 1140 ttgttgcaaa aaagtgccgc tgtctgttcg tctgaaccaa aatcgaccag gaatgtatag 1200 cttcgagtag gagtcgataa agaacttgag gggcagatat catcaggagg gaagtagttt 1260 tacacataga gggggattat ccctcgctta aattttacag ccctggattc ggttgagaat 1320 aactataggt tcggagggaa gatgaaagtt gacaaggtag ccccatggct gaccgaataa 1380 agagegeega actegagtae acattaetee ggeagaeaaa tacaagaggg tecaaaetgg 1440 cccctggtga gattcgatag taggtcagga gactgcggtg gctggttctg gcgcctgtta 1500 tagtataaga gatgggcctt gccctaactg cggcgtcgga cagatatgtt cctctgagtg 1560 aggtgaggta cattgtccat cacctgtaag agataatggt gagtaataag atgcatttag 1620 gggatcccag cccgagcatc caactaaaga aagacatggc atggccaaaa caactcccct 1680 atgcgaaccg ccttgaagac tgctccagat cctgtatatc cacattctgg ccgagttctt 1740 ttagaaatcg atcaatttcg gcttcaataa atccttgctc aggctcagtt tcagatccac 1800 aatcgtcgag accaaattca tcgcggtact gctggtactt ggcctgatag agagcgtgtc 1860

tatccggagt taaaccagat atggacccag ctacagaaca gcgacgtcgc ttgacctttt 1920 cctcctggct ccgagcagaa agagagacga aaggaggaga aaacggaaca gagctcatat 1980 ttgggctaag acctaccagg ctaaaccttc tattaccctg cacctcaatg aagttcagaa 2040 acgccgcgta ccgactgaac acctcatttc gttcttccga gtcagcaaca atccggcgac 2100 ctgaacgttc aatgaaccct tcaaccgtcc gcagcgtcgt aacgaggaac ttgttatacc 2160 gcacgcgctc gccctccggc acgctccgag tggctttgaa ttgcgcaagg agtcggggtc 2220 cttctttacg tagggagget gttttgctta gegtgetgea tetgaaageg tattgttetg 2280 ctagggtagc atctagaacg acatgttagc atggcctgaa gtagaaggaa gaagggaaga 2340 agggggggga gggtgctcac cgaatcgtcc tccacggccc ccgtcgatca cgaacttggg 2400 gatttcacgc ccagcagagc ttccgcgcca ggtctcgcgg agcctgaact cagatacggg 2460 cattgtttgg cttacgcgga atagactaga gtgaattgat gttggttatc gtttgtgttg 2520 aatatacaca gtgaattgtg agtatggaca gcaatattgg aagtacagga cttggtgggg 2580 atatgcattt gtatttatac tcgcctattg agaacttaga gatcattgat gcggagtggg 2640 tgaggattag tgtgttaagc ttattgtcta gagaaggtga taaacaatgc ctatgatgca 2700 gtctctctat actgggattt aatttgctga aaggagacag gaagttgctt tataacgttc 2760 ttgtaacgcc attgtcaaga gacatgtcgt catcgcacta tattactagg gttcctctaa 2820 caatggcaag taagaaagag tgggaatcta gagcgaataa agcattgttc ttcagagctt 2880 cgctttcttc ttccctttga cgttctgaaa ggtatctcct gatagaagga agtcgggata 2940 attggatgac cctataccgg cagatgatat gcgccagcta gctccgtcca ctgtaaaatt 3000 tgttagcagt agaacctgag catagatcgt gcatacttac ccacaaggat ctgacagctg 3060. tcgtgcgcat tc 3072

<210> 3120 <211> 1132 <212> DNA

<213> Aspergillus nidulans

<400> 3120

tacagcttac agattccacc aagcgcatgg aataacagtc cccaggtgcc acaaactgtg 60 cgcatcaatg tttgcatacc acggcgggaa gtccagtagc tcaaggctca tggccaagat 120

gatccaaacc acgatcagtg ctggccaaag ggtccaggtt ttacccgttt tttggtagcg gacaacgctg aagcaaatcc acaaggtatt ctgaatcatg cccaccacga tgtttgcaat catattatac gtataatccc acgaccagaa gctaagatag cacacgtgaa tagtgtatag aagaatgcag actgtggtcc acagacgccg caacgtgggc ctgtatctcg gttgttcttt atccaagcgg aaaatccgca ctgtagcgag atatagccca tacaatacac tcgcaccggc 420 tccgaaatag tccagtttct cggtcaacgg aaagtctcga gcgtggaaga gcatgctaaa agtccaggct gccaggccgc tgtatccaaa cgcgatataa tatttctgga gaggatgcca 540 tgagggagtc atttcacgta atcgagccat tccataccag tgagcaagga aattaaggcc 600 agagaagatg accgaaaaca gttcctgcat gcccaggatt ctgcgaaaag gccacttccc atgaaactgg accacagggc taagcatagg cggatcgcga gcgagtcgac ggtctgtcac aacatgttgg caggtatagt cacattcggc agggcacgtc cagagcatca gacggagaag 780 gaaagctagt agcgctcatg atcagctaga aagtacacaa actgatgatt gccattgtga 840 aacaagaaac atacgtatgg ctgagtcccc atcctgccag ttggcagcct cacaaatctg tatccaatga ggttagttcc aatgcaagcg taacatgtga gtagttgtgc catgacacac 960 catttgtagt aggcaaggtg gtcccctaac gaggcagccg actcttgaag gcaggatgcg 1020 aggataagca agagacacca gtagccggcc ttctttaccg ctggaaataa aatcgttgtg 1080 tactcggcgg gaaaatgcac cagggtcgga gtcacgcgag attccacaga gt 1132

<210> 3121

<211> 1809

<212> DNA

<213> Aspergillus nidulans

<400> 3121

ggaagaggag agtagaaaag gggagaggcg agagagggtg agcgacaagg gaagaagagg 60
aggagaaagg aaggaatagg tgttgagggg ggaaggagaa gaggggaggt ggaggaaaga 120
ggagtgatag agaagaagag gaagtagag aatggggagg tcaggagaga tattgaacgg 180
agaggtagat ataaatacgg aaaagtacag agaggaggca tgagggaagg tgagtgaggg 240
gggttagaga taagaaaggt gtggaaggt taataaaaga agtaagagg aaagggaga 300
gaagaggaag gaaaaaaaggg gaaaagtaaa aaataaaaga atgaggaagg agggaagaa 360

gaaggaaggg atgatggagt aaggattcca gatggtatga ggcaggagga agtctgtgag 420 agtgccaaga gacatgatag aagaggcgag ataggcgagt gagggatcaa aggagtgccg tgagategee ggaggeaaca geeageggea agaatatgtt geeattgegg eggaatatae 540 gagattggta ggatggccac gatggcagaa gcttatgatg tagcattggc cccccattgt 600 ccgttaggcc ctagtgccct cgcggcaagt cttcaggtcg atactgttag tgccaacttt 660 gctatccagg aaatgagctt gggcatccgc tataatgctg gatcagcgga tattgacacg tatatcaaga atccggaggt ttgtaaggtg cagggcgaat tgatcgacct tctaaaaaga 780 ccaggcctgg gtattgagat tgacgaagag ataatcaggg cagctactgt ggacgctgtc 840 gcatggcgca accgcacttc tgggacctga gagaactaag gggggatgaa tttgatgtcc 900 tcagcttata gatcactttc ttgtcatagt gctgaggtgt tcgctccgat gaaatatcag 960 ccgatgactg gtaccttctc acactttaag cactaactag actaaatgac atttggtaac 1020 tgctgctaag acatctgctg caggtggtta gaaatggcac gtgcaccctg cctagctgcc 1080 ttatettege ttteccagaa agteaetttt tttecccaeg ttecaeccag teettaacaa 1140 cgcgtctgag catccccatg gctaaaaact gaattttttg ttttcttctc agatgctcgt 1200 atgtgatgct ttttgtctga tatacttcga tggagccgac tcgaggccat ccgaacaaac 1260 ggcgatccgt caaggaacgg gttcgtgtta ctcgcgcctg cgatacttgc aaaaagtaag 1320 tcactccagc ttgaaccatt actacacttg acctgactcg tgacggttag gaagaagttg 1380 cgttgctcgg gtaccctacc gtgtttcctg tgccaacgct cccagttgag gtgcgaatat 1440 accgctggtt acactcgagg aaaagtgcca cctgtaccca caatcagcgg tgctgatagt 1500 atgaacaata ccattcaaaa tcatcatgaa aagactacga attccagcgt ggagagccga 1560 tetecaceta aacegeagga cacegeacaa aatgtaetet tagegaggga gaaacaggtt 1620 aacctcccat catcgggcaa ctcacctgag cctcaccaaa ctgatatgga gggacattat 1680 gtcggtcctg cttctggcgt ctccttcttg ataagagtac agaagcgtct acatgagcat 1740 attitigation of the action of the state of t 1809 tctttctgg

<210> 3122 <211> 3772 <212> DNA

<213> Aspergillus nidulans

<400> 3122

ttcaaggcac ccagtcttat ctccccgagc ggcttccgca atttttgtgt atcgctaacg 60 ttcacggcca cgtattttag aatacgatac tgggttatga cgctgaggac gagatgtcga 120 tetgtetgge tategttggt aacaagegga ateettegag etegggaete gageataege 180 cggcacgcct cgtacaacgg tcgctctggg tcaatggaga tagtctctgg cggggcgaca tccaatgccc gttccacctc tatatcactt gtcagttccg aacgtataac agtgaaacgg 300 tttcacatca cgcacctcga aggctatcca agcggagttg gtctatttta tctaaggcgg 360 cgggattttg gaagtaatat tgaatgacat tgatgtaatc ggacgtagtg agaaggccgg 420 cgaaggtgga cgacttcgag tcccatagcg gcgccgaaac aattcctatc gatcgcgcgt 480 cagtatcggc cgtgcattac tgattgagaa atgattgaac catctgccag acgtaccatt 540 ctgagtgagg atatttaggc tctctttcac tgtcaaggcg gtgtcgaaga cgatgagccg 600 660 gaaacttaaa ggaaggacat catagctggt gcggaccttg aggaagttgc ggatggcacg ctagacgaaa attagagctc agttagcatc gagcaggatt tgaatatcaa caaccaagcg 720 tcagggtaaa tggacaacaa gcagttcagg cgaatgcggg gagcaatagg tgcgatgatc 780 gagatgtcta ctctccacca tgggctgacg tatgcgaaac attgtcgcaa aagcgagaca aagcaagcca ccaggtgata cgatcagggc gagagaaaca agaactaaac ttactaggcc ctggcgctct tcccgatcga tcgccctttc aggctgggat gggggcattg gatatgagag 960 aggtcgcgat cggaggtaag aggagggctg gacaaaacca ccctcgtgac cacagacgga 1020 gaaaggaggg acggggacgg gggcggacgg gatcgtgctg accgtgcgaa acgtcgatga 1080 ggggagatcg gtggcagaag gaagagtagc gctggcagtg gtcgccgtgg tggtagtggt 1140 tgtggtgtcg ttggctggag gcggcaaccc ggagccggag ccgctgattc tgcccgtggg 1200 gatccgccca cgatgctggt gctggtgttg ttgacgatgc aagttccctt ccgatgtaga 1260 cgccattttg agccagcgga aaggcgggca ggctgcatac agaatccccc ttgggccgga 1320 agaggggtaa gtatggacaa ttacacgcct cgacaacagg gggaataatg cagggataag 1380 agcacgacta tgcaagcaga ctactccgcc tagagtacct acttgataca aaacaggcca 1440 cctacatcca aaagaagctt caagggagat gggaatagga ataggagcac tattgacgac 1500

taaagcatgc gcactgctat aatgattata gttgatttct gtagcatcta ttcgccaata 1560 atactettaa gaetggetga geageaeage atgaaggagg ggaaggaggg geaeegeeat 1620 gatattaaaa gctccattcc cccctagttt tatcccgtcg cagaatcgct ttcgacttct 1680 gacatectge tetecagata ecatateaga tttaaagega gatgateete tatetegtee 1740 tcaaccagag ttgtcacttt ctatgtggcc tcaggcctcc acatccgagc cccgcgatcc 1800 cagcacgtga ttcatcgcag cgaagatact cggacccgac cttgaccttg acaccatctc 1860 tgacgtccgt tccatctcta cgcacgatcc aacgccaagt ctcgaacaga gctcaacacc 1920 aaagcaggtt ttcaaccagg gcggttggac ggccgaaaca caggctgcgg gttgagttcg 1980 tcgctgagag ggatggcaga aggatacagt gctgcaaaac catgtactta cagtcacacc 2040 tggatatcaa tgacaatcat ccaggcagta taatcatgaa ataggagtcc acctcatttc 2100 cttgtgacat agattgactt gtaaggtttt aaacacatct agctattcaa tcagaggctc 2160 accaacaacg tgcatggtct cccactccca atcgccgcct ggtagctatt tcgatcctgg 2220 atatgtctag ttacagtgtg agtattcttt gctgcattca ggctcaacta gataatacgt 2280 acaggetgtt tegegggtge gteaateeae geteecatte tataetgege atggteeace 2340 ggcgtcaacc gagtcctgaa ccccttgcca tccttgcagt tgattaagga agttcatggg 2400 aaaaagaggg ttgaacggcg cagcatcttg tattgactgg atctcttcgg gcgagagctt 2460 gacacttatt gcatcattca tccccttgac gtggtctatc gtctggacgc cgacgattgg 2520 gactacgtag gtcgatgggt ggaacaaata cgccagggcc taatttagct gctcagcagt 2580 ccgtacactg aagtttcaag agtttgggat agagtgttga ctcacgatag cctgcactgt 2640 agtettettg geaacagega cettttecag tgegecagae acegtgaget catgeggaee 2700 caattegtaa aagetetttt ggeeageetg etttttetea egetettgee tetgttggea 2760 agatagaage aggeteeege egagegeege eeaagggaea atageeatge eetggteete 2820 acacatgggg tataateteg getteeatat eaeggaaege agegtteeat ttgeettggt 2880 atattgaaaa cggagtgatg ccatttttc gagcgactat cggggatgat gttagttgat 2940 ttcggggacg agaatctcaa tatatgaacc cacactcgtt ggccttgaca acgacccatg 3000 tcagaaaacc cccaggtaca gtacctgcct cgacatgaca agtgaatgca gatggatcat 3060 gacttcctcc accgaggtag cgaaatccca cctacgccta caagatcagt gtcaacttgc 3120

aaggaatacg tetggetaac teaccagtga acatagagca cateaacata gtetgtetec 3180 agettettea gactatecet eccagacaca aacatacget ttgeegagtt acceacaaaa 3240 ttgetetgta eggeteatta teecaateat gaettegtta etgegeegaa taettegttg 3300 caateaccat etggttgege acceegeeg ectecateca ggeacegata tgetteteegg 3360 ataeeteact gttatatacg tttgetgtat eggatgaagtt tteetetga gagtagaact 3420 eggeggageag tttgaacggg teeteactea ecceaaaaag eteactecat teggttgeea 3480 aggatageeg aaggatatt eggeggggag actttgaeceg aggetgtggg 3540 ggaaggatge ggtgaaagge taaceggaatg gegggettgg aaggaggtt gaagaaagac 3600 ateetgeete taettggatg agggtegea eaggetgeeg ttgttggat 3720 taatteeeg eateatget teeteatget teeteatgge atgeetatgg etgettggat 3720 taatteeeg eateatgett acatagtet teeteatggee atgeetatgg etgestatgg etgestatgg

<210> 3123 <211> 898 <212> DNA

<213> Aspergillus nidulans

<400> 3123

ctcatagtgg accggttcct caggtttctc cactaagtgg atagcctcgg acaacccccg gccctaaata tcctgaacac ttcctaatcc ggaaaaacta agcactcctg caaaggacta gtcttcttgc acaggtcact agcaaaacag tggtatatac tcactgccct gtactaggaa 180 cgggattttc gatatgttgg ccgtcccaac ccacctgccc gaacaagcag tgtaaagcac 240 accggcatgc cgtgaaacct gctacgtatc gaccctctgc atatcaaacc ctgctctagc 300 agtacaaatc accgacggca gcccatatct cctattttag ttatcacata cgcatacggt 360 tatgagccag cacatataag attggatatc atatctccat ttttttaccg taactcatac 420 aatccttccc tcccattcac atccacaacc acactcagcc ctgaatcttc aggtccccta 480 gtcaacctgt acagaccaaa cacataaggt atacatcata atgtccccca tcgtcctccc ctctgagtcc accgcccagc ctgcaagccc cctctttgcc ctcacaaacc gcacagtcgc 600 catcaccggc ggcgggcgcg gcctcggcgt caccctcaca agcgcaqtcc tcqaagccgg eggtgatgte geetgettgg aceteetgee tgeeceeagt geegaagaat gggeageegt

gcagaaactc gccgctgcaa gggggctgca ggcaacgtat gtccagtgcg atgtgacaga 780 tgaggttgca gtccaggcag cactagagaa tattgcagcc gttgggcttg ggcgagggat gccgctcaga gggttgatta cttgcgcggg gattcagcag atggtcccgg cgttggag 898 <210> 3124 <211> 2083 <212> DNA <213> Aspergillus nidulans <400> 3124 ggtcagttta tttatccctt ggtgggcgca cattctcggc gggacatacg aggtgtcagg cttgaagacg tatgcaacac cagcaacgag caggctgcca atgaatccgt agtaccaaat gtteteceaa eceteettea egtaettetg geegggetta aegeegaaga ggtaeceagt .. 180 cggggggtcg tagtgatcgc cgtggtcggc gccgccgcgg aggttggttc gcgtggagaa gccctggatg ttctgagcgc tgcggcgaat gcagcgggcg cgaaggcagt gtgacaaagg acgaagagtc attttaggat atgtgaagct tgctctgtac ttggattaac ggatcggtac gggcggtggc ggtgttgaac ttccgtcgga cggagcgcgg tgggctcgcg gagaatggat 420 480 aggggaaact tgttcactgg gatcgcaggg aatgactcgt agaggggtga cgagatgagc 540 cggtgtacga tattcagaag ccgcaaaagg ccgatggagc caagcagata agcctaaaca 600 ggaagatege tatgeegeet ttetgeetea tgteteagge acattaette gtaggaegaa cgcgttggac gcgtttggac acacgctcct aaatgaggtg cttctgccct ggattgtaca 720 gagtacggaa taatctacct ttttgaacta atcaccaatg taagggagct gttccactta gcggcttctt ttttttcgat cagacattga tcggtaacgt atccttgctc tccagctttt 840 tggttaactc cgcctttact aactgttttc gaagccagac tcgagatgcc ctgctgctct ttgcttgccg ggatacattg tcaagatgaa ctccatttat aagggcccgc gccctattcc 960 cgcttccgca gattcgcgct cgaaactaga cgccttccga tacaaaacca ataaccaaaa 1020 tggcactgcg atgtcgccaa agaagacaac cccgcataaa ggacatacaa ataaagaaaa 1080 tcaaacgtca tggctgaatg gcgtggtgga gcaagacaaa tcagagtcag ataaccggca 1140

gaatctgcag gaagggccag agcccaaggc tgtcaaagat tgcccacaga ctcccggcaa 1200

taggetgeet etggeagace teattggeaa egeagaagae gettteagee gggeeeetat 1260 ggcgcaagag tttacgccag aagattatgt tatctggcag catgctccgc ccagttcaaa 1320 cccgagcacc cagacgcccg Caacccaaag caagaagcgc cgccacagct cgtctccgag 1380 tagctctccc ctagccggtt cgaaaggggc gcggaaagga tcttttgacc tgcagtccat 1440 teaggeettg ettaagaeee eecaaaatga ettageaace gatetatgga ataactatgt 1500 cgccaagact gccgtgaatg taacagacct ccagcaacca cgctttgcgg gtcttctgtc 1560 atcctccccg cgcacaccca Cgtcggccag ggcaggccag gattcttcgg gattaaggcg 1620 atccattagc tgcaatgctg aatggcctag cactaaggcg aagaggagga gggtggaagg 1680 ggagagcccc cgcaaaggcc gtgctatatt ctcacgaact agaagcaaca ttatggttcc 1740 gaaagatcta aaaacgtcca acttcagctc tctcgttcaa gaaatggaga gaagtctcaa 1800 aaaggctatc ccaaaatact cagacacctc caagaccgca cctgctatag cacacactga 1860 gacgcgacgg agtcgatcag catccccgtt ggaaactaga cttgccaaag gtccagtcag 1920 ggaagcaatc ttggataacg aggtgaattg tgctcttccc tctgcaaacc agaaaccccc 1980 gcaagattcg tcatccgaat tcggcgatga cgaccttgat gagtttcttg gattagcgaa 2040 tgtctcagat cctttcgtgg atcataatca agtaggcagc aaa 2083

<210> 3125

<211> 1154

<212> DNA

<213> Aspergillus nidulans

<400> 3125

ggatgctgga ggttgcgcgt gggaagggca attatcagtc tcttgagacg gcagatttga 60
atgaaggaat tcttagcccg gatgggaggt acgatgttgt tgtgtgtgtg ggcacgctga 120
caaagggtca tgttggggca ggtgtattgg aggagtttgc aaggttgact atgaaagacg 180
gattggtggt tgcgaccgtg catgatggga tctgggaaag tggtgggttt aaggatgtga 240
ttggcaagtt aaaggagaag agggtggtga aggtcgtcag tctggattcg tttgggattc 300
tagaggacga gagtcaaggg gggaggatgg ttattttgaa gaagatatag tacacagata 360
tcgccctgct gacaaagaca aagccaaaga cagaatgtca actgatagtt attatttgat 420
ttattggatc gcgctgcagt acggaccagc taatgtccgt agaggtagta tggacaggta 480

aggcaatctt agggatatac ctatggtttt atagccattt tggatattcc caatccaagt 540 qtcaqtqcat cctqtqtaqc cggtaaqata atcacgcgat aagtqcctct aaatqtaqtc ctcaqqtact tcggctagcg tagcaacttc tcgcatgtct atctgccctg tatccqtaqt cggggagggt tgtatgcgcc gtaacagact cacttctctc atctctcqct ttcactcttc ccgtcctgca tttggtcttg tcatagcttt cattttgctg tggatgcttt gaattatcta 780 tgctaagata ggaaacactc cgtcagcggc gtcttggatg gaaattccgc cattcgtccc atccaactag cggtctgttg atgcggtcag ttaaccactc aatatcgcca cacgaacttt tgcctggaga tcacagttct ctcaaggatg gttctcggag agacgtctga caaggccttt 960 caataagtgt ggtatgggat caggcgcacg gaccgttgcc gactggctac ctagcattgc 1020 agactgtacc caaactcata cccctaaata ctactccacc gcgttattga tggatatgat 1080 atgacgatgg gacgatagtg cagtttaccg ggccgtatac cgcttgtcta gacgaccaat 1140 accacgtacg acag 1154 <210> 3126 1337 <211> <212> DNA <213> Aspergillus nidulans <400> 3126 gcgcattttc atggttgata ttcggtatag caggcgtggc aagccggagt gctgcaccgt 60 ggtctcgctt gcctgtgcga tgtacagctc tctcctcgtg aacggggaac agcgagatgt 120 agagcagaga tagccgggat cgcacgcagg gtgtaggacg ccgtgaatcc tatccggggc 180 acctcgacgc gccacagggt ttgcagtgct ggatggagag agaatgtgta agcggttgag 240 gtcgtgtaat gatggagcag ctccaggtcc gcgatacaag ctcgaatcct gcagacggtg 300 gegeatgtgg agettetaet ggaateeage geggegaeet etgteggett gteetggage 360

accetttgeg tgaettttga tgaaagegee gteetegaag tgetaggetg geagaeatge 660

ttgagcagga agttgtattc cgatctgagg agatggatct tctggatgag gctaatgctt

cttctatccc gatgcgattt ggaggagcaa aagaacaatc taccccatat cttctgcact

tgtcgcacac tggctttttc tcatcacact atctttcgat tagtctttgt tcagaactca

actacgagaa gatteteeca teeegacata cetteaettt eetgegettg cattgetgae

420

480

540

600

tetecegitige aattecaaaac tagegeeatig atgacgegge caaaaaaaaag gecaatatee 720
aateeteeaga caacteetagt eetitigeag egitieegetig egaaagggett ataatgagtig 780
ceagitiagag tittiggeagag eetigeatati tigeategaga eeetiggaaag teetitittiga 840
aggitettita ageetiteetea ateatggeti aggetiggaate titagigeaaa teeggeageae 960
taeeggeetgee tateeggiagg gitigitagitti aggitigaate titagigeaaa teeggeageae 960
aacacagaaa agatigeeagg eateeatate teetigeacag eegitigaatat taattagitiat 1020
tigitaggagee tiggeetigee teaetetagi eeataeeeta agitiggeeagg geageaegat 1080
actaceagaa acattataaa aattieeata agaeegagget gaattiggitig eaggattaag 1140
eegititeaga ateatateee aatigieaati tattigeeagt teaattitigg geteaataat 1200
eetigeageti aagaeattat atgagaeeag geeaggaaae gagtaggaaa geagtiggtaa 1260
gegaeeaggt eetetteaat eeetagaati eetetteag aaactgaagt gietaeeaet 1320
teteaacgta aggeete 1337

1

<210> 3127 <211> 2675 <212> DNA

<213> Aspergillus nidulans

<400> 3127

gaaagggcta ctggagggtc gctgagtatt tcgatgaaca tgtcgatgaa cggatcgatg 60 agatggttcg tgaaaaggtc gatgaaaagg tcgatgaaga ggtcgatgaa aaggtcgatg 120 aaaaggtcga tgagaaggtc gatgagaagg tcgatgagaa ggccgatgag aaggtcgatg 180 agaaagtcga cgagaaggtt aatgagaagg ttgatagtgc ggccgatgac aatcttcagg 240 aggaagtcgc cgaaaaacgg agtatgtctt tgtccgacga gataattgcg tcggcccaac 300 ggcccagtga tgaggttaag gagcgttctt cggaggcgga gagggcatct atgggaaagg 360 gaggcagccc gcgacctgag cgcgagtatg tcgattcaac gattgtatcg gagtctcccc 420 ttccaaagcg cgctgtgtcc ctctggtcgc agaattcgat taacgcacat gggatcctct 480 tgaaaggaat tgagcgaatt cagacgagaa ctatggcgac agatggatac cgaaagctcc 540 aggggctgat tcagcatcat cccgatctgt tcgctgatga ggagcaattt gctgtgttgt tgattggttt gcttgacgag ttggcggaac agactccacc gagcaagagt gtgttatctt

tgggtacggt gtcggatcac aagacgcagg ttttgttcac tgtgaagtac atgtttgaga 720 acttcaagaa gttttttgcg cctcactacc ctggcacaga tgtggcattg ttggaggcag 780 agaagtcagc ggagatgggc ggtcacttaa tcaaggccat tgaaaacttt attgatgaca 840 ttgtcaatgc ttccagggca cactatgaga tcaattgcgc cgtcgttacc catcttggtc ctgctgttca gattagggct ggcccccctg agcccagaat gttcgaaagg gcttgaatgt 960 tatcacacac ggccttacca gcataaagga ccgggaatgg aaacttccgc ctgatcagtt 1020 agagegeete ggagaatttg tgagacaggt gatgaegett eeateggtgg eeetgaageg 1080 gaggatette gecetttgea ttgetetgeg egagetagtg gacaacgaag agegattetg 1140 ggaacttgtt ggatcgaaga caaagggtgt cgacggcctc ctattctact accggacgag 1200 gcaggaggcc caggctgcat aggcagctca gtgaatggat gattttgcct ggacttctgc 1260 acatcttcca tttttggttg tgcgagatgt ctgtctggaa aggagttttc ttggacacgg 1320 tgtgtttttg gaggttggca gccgcatttt gaatggagtt tttgtttttgg acatggtttg 1380 ttttcaagat ttcctttaga tgttgcttca ttgccttcgt atctgccgtt ggttcctttt 1440 attgateett gtegattgga ttgettgtta taagttgtat accetactgt geatageatg 1500 aatcagtata gcatagccta acggtcaata aaaagttaag acttcatccg tgcgtgttga 1560 catctagatc tacttgatga attgactaga gccccagatt ggatcgaaat tgggaaggcg 1620 gacggtgaaa cgtcatggca agcgatggcc tcatgtccaa aagactggca gacaagtggg 1680 atgettgeeg teggggegge atactaeage tagaeegttt teeegeaeeg tagaggeaag 1740 tatatccaag ggcttttcta atcaagaata acattcgtgc cacacgccta cgacggcacc 1800 atctgcctgg gcctatttat ttactgcaca tattcccgga aactatggaa ctaaatagat 1860 gaggaacaca aattgggaag cttcaagctt tacgcaggtt cctcgacttt ggtaaaacaa 1920 tgattgtaaa atgtcctagt tttgtctagt ttcccaagca agaatacgat cagtccgacg 1980 ggagaaggat catctcgtcc caatgcatga attcatcccc cctttcgtcc tcgtccacaa 2040 gccggccgcg atacccagcg cgagtgctcg agaaggacgt atttatagca accgtctgtg 2100 gtgttgggag gtctgagaat tgagatagac gcgtgtctgg gcttgacgac gattcagccg 2160 tcgagagtgg ttcttcctga agccattccg aggggtcgga tattgtgtct gcggtagagg 2220 cttgcggcgc ttgtatttct attaatttct gctgctgtat attctgtacc tgtctggtcc 2280

ctgcgctccg tccatttgtc gagggttgaa agtacgggat tttgcgagct tttactcggt 2340 gggagtacaa ttcaccatca gtactttgga gaggaagtgg cagtaggaag gcctttttgt 2400 tcttcggcag acagtttggt gttgaacttg gtcgcggtga gtggttgttc tgccgctgcg 2460 gctgttgctg ttgcctgtgt tttagggcta atctccaga cgaatgacgg tcaagcgggg 2520 aagacgaccg agcatgcgga atctcagacg ggacaggtcg tgattcatga agcccaaatg 2580 cagaaatctg tcttctatta cgtgtacagc gaccttttc ttggtcaatg gatccttaa 2640 gtagcgaggt gtttccgggc ctaaacgttt gccgt 2675

<210> 3128 <211> 1359 <212> DNA

<213> Aspergillus nidulans

<400> 3128

ctaaaaaagg agaacttttt tccacatggg gtggggaccc ggcttaacca agagtttttg gtgggatttc ggaagggtc tcgaaattgc ttgtggggga aacaaccttg ttggtggtcc atataattcc atcccccggt aaggggaaag gctaaaatgt ggtaagccta ccgccaattt 180 tttgccgata attcttttca tgtcgcaagc ggccaagcag acaagggcta aatactctcc 240 ggatagtaat ctggtctccg cggggcatgt gtcgctcaac caaaagcctg gaagttttaa cgatggcatt tggattacct cctcgagaaa gtcctttgca tggcggggca gaactgcccc gagtggctgt ggtggaaaaa gggcatgaca gccttgaatt atttcgtaaa gcccacgctg 420 tagacacggt cagctaagaa ttaactgata acgataatgc aggaaagatt gcgcgaaaga 480 gcggtataag catgcgatgc tcgaacaaga cttacagtac aagggcgata ggataggaag 540 ccccgcctga gataaggaat tggacgtaga tagggtgaag gggcggtgag atgagcgata 600 taagtactac ggcatgatag tcaacggaat ttgtgggata tctgttgaaa aaagagtgaa 660 tctacgacag ccaatattcg ttcggcaagt tttccgccga ctccgcaggt ctggcctaca ttgcatatat gaacatttgc ttgggaagca gcattatggt atgcacaaag taaacaaatc 780 gaatgttata tacatatata cacacatata ttcctacgtt gagctcttat attctaggat 840 cgagagette teaategtee cataaaaaac tteattteag aageteatea tacaagtate aaccatcaat tcagacagct ctcacaatgc cccgaagtgc tgcgcataga gacgagtaag 960

cactggtcat tgtctgggat cacgagctgc agttatagca ctttcagctt tgtagccgat 1080 tcatcgtgca aacatgttgc gtaattcgtg ccgggtccaa taccagatca agcttttccg 1140 cagtcgcatg gcatccggca tgcaagtcgt atcgagttgc gtcgtgtcgg ttaatcctgt 1200 tccattcttc tatcatcccg ccgcaagcac agtcgcaacc acatactctc cgtcatgcga 1260 aatagataac cgcccaaccc tcccccttcg acaatcctca tcacgatcaa aaaggataat 1320 gtctggtctt ccttcttag agcacagagg ttactagac 1359

<210> 3129 <211> 1601 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations

<400> 3129

atgtccggag cagaggctcg ctcgtgctct gttcgcggat ggctggcgcg gtgtcttagc 60 tateceggee attacgtget accgettgge tactgeegga gteatettgt gattteageg 120 aatattcatc aggatgttgg gagagtctct cgaaggacga ggagcttgac cgcgatggca 180 ttgttatcgc cccatagatg gcggacgttc ggggaagaaa agcgggctgg ttgtggtttc 240 accaggegtt egttagteat egtetattta egetteeace atgteaagta tgteaacaga 300 ttaccttaat gatcacaagg ctaataaaca aatcatcaat tcatcataat agttatataa 360 ttcaataagg aaaaattgcc aattccaaaa cacatagggt attagaactt catgctcgcg 420 tcattacttc gtgaaatcat cgacccattc gtcgtagctg aagagacgag cagctttata gaagaaaata aagaaacaca gaagatgcgg tagattgcgg gcgcaacaat aacgcttgga tcctccgaga atgagtgttc ttcgctaaga tcttcgccaa atcacgaaga gctggcattg 600 aaccaagact tgatgctggt ctagactcga gagcgatggc cgctatgaaa aaaagttaga 660 actgacaccc aggttctaga gtagccgctg aaacttacta tctgtcagta gcatgccgcc 720 tgacgcggaa ggtgaaccac atgccctaca cactcgtcag catgtagcgt gagattctgg 780 840 gtccttggag tactaaccac gagcgcagaa acaatccaga caatggcaga gagaaaactg aatgeetgtg eggettteea aeggeeacag taagtgteat eegttatgga geeceaaege 900

caaatgctgc cgcagttgag tcggtcgttg gcatcgacct ggacaccaaa gaccgcgaac 960 cagtccatgg aaagaagcaa gtccactgtg cggaaactga gatcagcatc ggcacgggaa 1020 tcgctgtgca gagaggaatt acatacgcgg ccatgtgaag aaccccgacg agaacggaat 1080 cagccatatg ataccaaaca gtatggatat tccagcgacg acctcagtgt agatccatcg 1140 cgcctcgggc cagatgtcaa ggtcaccgaa cctgtggagg aaccagccga ttataccggc 1200 gaccacctat gagagttagc ataggttcgt ggattgtagc gtggaactgc gccaggaacc 1260 caggcataat gggcgggagt ggngtntgat taattgaaga gcttcgagtg ggctttggta 1380 aatcaatgcg gagggctgac aggttgcctt aggcctagtt tatctggttg acagaagctt 1440 attttcatcg ggccttggaa tcagaagaga gaagaaagtc atgataagga gcggcctcaa 1500 tattaatacc ccggcatgag cgcatcttca ccggccaacg ccccttacct caagtaacaa 1560 ttctgttgtg cgaacgtgac cagctcgagg ccatgacgtc g 1601

<210> 3130 1155 <211> DNA

<212>

<213> Aspergillus nidulans

<400> 3130

agcccctcca tgatcatcac catttccctc ttcgtaccat gaaactgtga gactcgactg 60 agactggatc taaaccagta tttgggggcc tggggctggc tcctqtcatc aagctttcaq ttatctggtt ctgggtccgt tctgagtatt atttgtcggg tcagctgaag tactctgagt 180 atatctactc tttgtccgcc attctgtatg cccagcccaa tcctcccgtt ttcctccatt tetecactet tgetgettga atetgttgge geetetttet teegaactat taaatetaga aaaaaaaggc taaaattcac aaaaaggttt gaagcgctgt gcagcattct tcaatctcca 360 ttctcagcgc catccgcctt gaattcctga cggcactccc tgcttgcttg atatgtgccc 420 accttctcgt tctcccatct acaacctctt atatcttaat gtgcccatcc cttcggtatc 480 cgcgggttat atggcctaaa accagttgag gagcgctaat tttgttgtta taactacctg 540 caacacacta tegtgaaget eccageeeta ettteeetea ecacaatgee gaettattee 600 agcgtcaatc gtccaaggaa gtcgaccaaa tcttcagcgc tgaccattat ttctaccagc 660 tccaaggget ccaaggetee tecagagaaa ttgaagaaag agageeeaa aceteaacee 720 gtggegeete gaagtgeaga geetageggg tetagetata cageaaaage acegeeggg 780 ecaacacee agactgaage gaagggeaag gatggeagtg egetgaatgt gttegagtat 840 ttagagaceg acagtgaete tgatagegaa teggaggtet egeteategga egatgaegat 900 etacgteete egtteceace gaatactaae eegaaggete eteetgeeag teggeaacea 960 aacacegetg tteeggtaea gaeeegaae egaacategt eggtgaaate taaagagteg 1020 eageegeeag gegegttega aggtteteea gteecagtae eagtgeaaet egeeaggeag 1080 eateggagae etteeacgga tgeagggaae agegtagteg ggtetgttge tgaateetat 1140 gaegggaege taeet 1155

<210> 3131 <211> 879 <212> DNA

<213> Aspergillus nidulans

<400> 3131

gagaactcta ccgtggttct agagcaaggg agggcgatgc attccttcag ggtaagaaga . 60 gaatagggcg agttgaatat tgctgagctg caatagtggg atctgtctta agtctgggtc 120 aagaagtaaa acaacagcaa ctgtttccta cgtagtaccg agagttctcg gagtccactt tataataata ccatcaacat catgttgatt gtagggatct tcgtgattga tttttcttca taataatatt ccatcaattt taggtcggtg ataggcaatg cgacataaaa attcaaaaat 300 ctttgcagcc cttcttcaca tcctaagacc atcaggtgat cttcgtcaac atcaatgcca 360 atgtccacaa tgcttctgat ttgcatagcg cagacgagat ctagagtctt gactctttac 420 aagateecaa ateatgggeg getgeeetga eggaaaceat eggaaatteg eetggtegae 480 ggcgtatcgc ccagaagatt tctgcgaaag gctatgatat aactaggctg ctagtgacta 540 ggtaaagtaa tatgcgccaa aaaggggcta cttgctatcg aatatcgacc tqttttattt 600 eceteteagg actetacatt attegeacta ttgaaaatte tegegeeete tttgecaceg 660 acgacggttt ctttgaaacc agggaggctt caggagagcc cgagctaaat ttgtttcgac 720 tataaaaagg tacgcaataa tgtgcctaga actactccgt acaactccaa cattccqaqa 780 ctcgatctag actttatcta ccttccgaca atgctgctgg tgactacgtg gataatgcgc

<210>	3132
<211>	4547
<212>	DNA
<213>	Aspergillus nidulans
<400>	3132

gcggtcatat gattcagccc tgttcagaga gaaaggcttg gtgtcatgtc ttgggacgag 60 tatgtataaa cgtacactcg tctatcttgc acaagaatca agctataaac caaaacacca 120 agaggcggca atatcgcttt taagagcctc ggaggtacat tgctgccata ttcggcttcc 180 atgtcgacta tagtatgaca ttgcactttg ccagtctcag atctaagcct cctcaacatg 240 ctttctctcc ccaacagcaa cagccttgtc ggcattaaca tccaacccca tctccctcat 300 ggcgttcttg cctgccagtg cgtcgggtcc atcaaagatc tccgcaacct cctcaaggcc 360 cttgcctttc gtctcaggga aaaacagaaa tattagggtg aagttgacgc cgatgaccac 420 acaccaaact atatagtatc tccagctaat cgcgtccatg gcaaccggat ttgcaaagct 480 gttatataga cccgcaagat tccccgtcag ctggtacatc atagccgctt tggatctcag cgaaaagggg acgacttcca ttatgtacgt tggcgcaaca ggcgagcaca tgtggtacgc 600 agcgctgaag acgaagatca tagccagcac accgccggca taccctttat cctcgaaatt 660 gtgtttctca ttcagtgcag agcagatcgt ccagatgatg tacgctatgc ccatactccc catgccggac aggaacaagc ggcgtcgtcc ggcgcgatcg actagtgtcg cgaacaccgc 780 agcagtgagg aagccccaaa cggagagaca ggcgttaatg atgagctgcg tttttggatc ggtaatatca atagtcacta acaccttggc caggtagtag gatgtcagcg cattacccga ccactgaagc atagcaggaa tatagcaagc caggaagagg cgatggcggt tgcccctggt agagagccat teegteeace gggataggeg etggacettt teeatttega gegtegeegt 1020 gatctcggcc atttcgaaac gaacgaggcg ggagtcagcg tccccgtgac cgtggtactc 1080 tgtcaggatg gcgagggcct cctcgcgccg gccttggtag atgagccaac ggggtgattc 1140 cggcgcgagg agagctagga ctgcctggac aagcgagaag aagcattgca gtgcgctggg 1200 gateegeeag etecagteeg accetteeat ettgaaggte eegtatgtea eeeaggegge 1260 gatcagcgaa ccaagtggcc aagtaaccag gtagaaggag acgagtttcc cgcggtgcgt 1320

tgggtaggcc acttcagtaa gcaacggggg cgcagcagta gccactattc ccagtccaaa 1380 gccgacaacg aatctactga ggacgaacat gccgtagttc accgctgcgg cttgaaggat 1440 cccgccgatg attatgacga ttgatccgcc gcagatcgga taccgtctac caaatcgctc 1500 gcatagctgt gatgagatca aaaccgagat cagtgtgccg cctgtcggtc caaatgtcat 1560 ggcgcccaga cgcgtgcccg tcggctggcc aaagtagctc acccactgcg ggagcgactg 1620 catgccgttg agcatgctgc tgtcgtagcc ggaggcgatc tgagtaagga gggcgcaaag 1680 aagcagggta ttgagtttca gaagggtcca atcacgatac cagggtttgc ggccgtctgg 1740 gattacgtcc ctgaggacga gcccctcaaa agtctcgtgt ttggagtgag agagcattgt 1800 tagggttgtc tgttgatctg ccggtaggta gccgtaggga acaaggcaac gagctcggcc 1860 tacctacaga acaatccttt tcatctttat atgtcggacc accccgttaa gctctggcct 1920 gcttggaccc aggatgcttg tatgccgcaa ttggtatagt ttacccccgc agtatgccat 1980 gtattgggcg ggggaagcca ggatcaagac tgggtctcgg ggatatcgga agggagatcg 2040 acagcegtga etgeetggte ggtatgaeat ggeaacttgg cagatgaeca ttatetgege 2100 cctcagacat gggataggat ccccggacaa gctttgcccc gaggttgccc ttctcattgc 2160 agggtctttc cacageeggg etgattgaeg gataaaagag teeeteeegt gtteattgae 2220 ttttctacaa gactcatatc aacatgccac aaacagcaga gggcgggcaa gtcctgatac 2280 aggagetgtt egeegagaac gtgetegeaa aagtattaeg tgtggeagag gaggeettaa 2340 aggacaatgt accatcactc aagatcgtca taatctattt ttctatactg acaacgtcct 2400 agatececee aaeggtetae eeagaatteg tteeecagaa eggegeagae geegggeggt 2460 actttetteg egaggetagt ttetggaeat gegggttett teetgggett etetaeaeae 2520 tcagggageg egeggteaag taccegeagg etttteette eettggggge aatgacaatg 2580 aagccggatc agcagctacc accgaggctc tgctggaccg gctcacctcc ctgtgtaccg 2640 cctggacaca gcccattaag gccatgagag cgcgcaccga cacgcacgat ataggcttca 2700 tettacaace gteectgegg aaggagtggg agetgaeete caategtgaa ageetegatg 2760 cgctcattac aggcgcgcac agtctcgcca cccgattcgt gccgtccgtc ggagcgattc 2820 gcagctggga cgcactgcga caggcagata tagagatcac aagcctggaa gatgactgcc 2880 ttgttategt egacageatg atgaateteg atetgeteta etatgeeteg eateattegg 2940

gggagagcaa gttggcacat atcgcgacca ctcacgcgaa gacagtgatg cgatctcttc 3000 ttcgacacga atcacggccc ggcaactatg gcggataccc gctgcatcta tactctacct 3060 atcacgtggt caatttcgac cccaagacag gagatgtgaa agcgcaccgc acggcgcaag 3120 ggtacgccaa ggagtccacc tgggcacgcg ggcaggcatg ggggattaca ggctttgcgc 3180 agacgtacaa gtggactacg gagagggaat tccttgaagt tgcgtgcgga ctggcagagt 3240 actttataca tagactegag actteaceeg catgegtgga geggecagtg acceageteg 3300 agcettetgg ageageeaac ggtggaggga gaaagategg tegetaegte eeeetetggg 3360 actttgacgc ccccatcgag aacgaggaga atccgctccg cgattcctcg gctggagtcg 3420 tegeggegaa egggatgett ttgetttege agteattgge ggggattgea gaeetegege 3480 cggatggcga ggcggctaga gagcttgagc ttgcgaaccg atatcgcgcc ttcgcgatga 3540 aaatcatgat tgacgctctt gagtactcgc tttcggaaga gaaggccact ttgcgccttg 3600 ttggcagtgg ttctggctcg gacggtgtgc gagtacaggt tcaggatatg attcctggca 3660 agegettega egecattttg aagaatgeea eggeaaatea taattegeaa gaceatgate 3720 ggtacagcga tcatgggctg gtctatgcgg attactatct gctcgagttt ggaaatcatt 3780 tgttgcggat ggggttggtt taaaatcggt tagggttcca gtggattaaa atataatcga 3840 gtttgagtag aaccagaatc acataggcaa gcaagcaatc tgttgaatac ttaaacatct 3900 agegegateg catetetget gegeteteet gagacetete tgagetggae tttaggeaca 3960 tccagccage tetetegeat aegecgetgg aegeteeete caecetteet ateggetgeg 4020 ctgtcagcct gctgagccct gaacgactcc gcagcaatag caaataccct cgttacgagc 4080 tegatetett etecaggete aacateaagt ageteaaget ttgegaeegg aaceaaggtg 4140 cgctgggaaa gtagattcgt gttggaatcg ggcttcatgg cctcatgatc tacagacgcg 4200 acgggcccag aagagctcca gctggactcg ccagatcgtt gacgcactgc ttccgagaca 4260 attccgcttg caccagcctg cgagatcacg agagcacttg attgggttac gtagacaccc 4320 teacteeega taetegeget etegatatea eeateegtga acaceggeaa aactttette 4380 tteteageeg ggaetegeee aatageaaag eegeeeteaa eeaggtgeag aeteteeaag 4440 gacgtcttcc ccttcacttg gatccggtgg acgcgggtat gccaattggg ccacctcgcc 4500 gttgcgggat caggcacgtc gtgacgacaa cctgcccgtc gccccaa 4547

<210> <211> <212> <213>	3133 1156 DNA Aspergillus	s nidulans				
<400>	3133					
tgttgggcag	cctgagaagt	atgtaggtgc	ggcgącgagg	atgtagggcg	gagcgctgag	60
gagctggctc	tcttggcttg	tgaatcccat	cccggtcagg	atgatggtct	tgaaatagct	120
atacgcatat	cctggaagcg	ttgacgccat	gagattcaat	gcccagaaat	acagcttcca	180
gccctctagg	tggtgcaaga	tcttcgcaac	cgtcagtgga	tcttcttccg	catcgccacg	240
gtcatggttg	atccgatcga	tcacaaattg	tctttctgcc	ggagatagaa	agccatctgc	300
tttggtggga	aaatcaatga	caatgagccg	cccaatagca	caaactccga	ccgtaatggc	360
gccctcaact	atgaagatcc	ctagtgcaca	tcatccggtt	gcgcaggtcc	ggattctgga	420
gaaatgattg	cgtacatctc	cagccattaa	gaccataagt	acccttcagc	agagtcaacg	480
cataggcgaa	gatggctgca	aaagcgttta	aaaccacaga	tatcagccag	aatgccgcta	540
gccttttacc	gacctcaaat	cgcttgtacc	agcaggtgat	cagataagta	caccctagtc	600
ttgtcaattt	ataatcatga	tcagaccttg	aagcctctta	cctggaagga	agccagcttc	660
cattatccct	aatcactaca	gtcagcatca	ggcagcctcg	ttcggagccc	attcaagcct	720
accaagtaat	gttcgacaca	ctgtcattgt	ttcccagctg	tatgtgaatc	ccataccgat	780
taagatagcc	ccgaagctta	ctccaagaaa	agcaagccaa	ttcgcggcac	cggctttggg	840
gaggatgatg	ttctatgatg	tatgaggctc	ttgtccatga	tccttgacaa	ggggaacggc	900
aaaccaacac	ttggaatctc	gaacaaactt	tcatgctcca	gttagcatgt	ctcgcaagaa	960
tcattactgg	aggctcacat	gtaagccaca	aaaaacacca	ttaccacaac	ggtataccgg	1020

<210> 3134 <211> 1310 <212> DNA <213> Aspergillus nidulans

acccgccgcc tgcagt

ttgccgacgt caagcccgag atcttcttcc atacccgcga caaacgcaag cccgaggttt 1080

gtacgatcta tcagagatgt acagtacatt aaccctaaga ttggtaggag acgaagatca 1140

1156

<400> 3134

ttataaccac tgctgttaaa cgacagacac gggggaatcg gtgagcacgg agaaatagag 60 cacgaaagat aatggtaacg aggcatgaat ttatcgcaac gtctatagat actatatatg aaacttttca caaaccaagc aaaaaaaqaa tagaaaaagt cttaactcat qccatttcat cccatcggcc tctcgtcaca tcaagactcg ttcccaggcg cagatccatc ccccgctgcc teegeagggt eeeegtgete caacageeag teaacaatet geetegettt egteaeeggt 300 acctgcgtag cattaccccc ttctgcagcg tcacctgcaa cttcaacctc catctcctcq 360 tccccatcct gatccttgcc ctgactcgga tctggagtct gagtagcttc ctgcgccttc 420 caatccgccc gctcagctaa gaacaccgca tcaaggccgg cctcgttctt gattgagata 480 tctgccccag cctcaacaag caccttcacg cactctaggt gggtgttgag cgctgcccag 540 tgtggggccg tgtttccagg tgggttcggt gggttacagt ggtctttact tcagccgctg 600 ttaataatgt totcattttg tgactgaaag aagctgctct tttagctttg taaggatttc 660 tgcatatggt tagcatacta tccacatccg gcctggaatg caaaagggaa tttggggagt 720 aaataccaag gtttccattt gcagcagggt aatgtaggag acagcacccg ctaccgccct 780 catcttcagg tgccgagtcg actgccgagg caatgattac ggctggcttg acggaatact totgggatag ggctgtgagg tootottoca gggctgcaga gtcgccggcg cggacatcgt 900 agatgaggtc gtcgacctca tcgggtgtga gcgttatcag aggcatcttg tctttttctt tecetttteg agteettgat ttgatttgat ttgttttett tetettgtge ttgteeaagt 1020 cagatgatgc cctatggtag acacaatcgt agaatggctt ttttggatcc cgatttggat 1080 tgatctgagg ggtagttagt ctgtcttgta ctcattataa atagattatg agttgtatag 1140 tgaggagaaa tttcaaaaagc cgagacgtga tagacagctg cacctgggca gcagcagctc 1200 acgtctaaca cagccgtgat atagttaaaa gtccgaggca ggtaaccact tggggtgtct 1260 actagaatag agcacacagg aactctatac cggcagattg gtatagcgca 1310

```
<210> 3135
<211> 840
<212> DNA
<213> Aspergillus nidulans
<223> unsure at all n locations
```

<400> 3135

actccatage getegtetea tecattgaae gteggaette gaeeteaagg teacetgeaa ttgacagtct tttagtgacc ctgaagctga atttgggaaa cggacgaggt tcagacttac ccttcctaga gatcagctca gaactgccgg actccttggt gttgccctcc atcttcctgg 180 ttggcggcgc aatgccaaaa tttcaggcca aaagtttcag caaggcatat gttgttggag 240 gggacgagga gaaagagata acaaagagaa gccaactcta aggcgcaagc acacgggatt 300 ctgtttgccg gggaggactt tggtaatcgg accacatccg gacccgtcgc cagtgaatga 360 gcagtaacat cttcaactaa tcagcacagt ttcctgtgaa tagataaagt gcattcttct 420 tggctcaata gtcagctcag ggaatatcac agcctataaa gtcttggtta gccacaagaa 480 gagtatgtga atttgctaca gtatccctaa ctctatagaa ctgggcgaga cttctcggtc aatctcagct tcagccagca ggctcggtcc ctcatcctgg cggccatcat aagtccgcat 600 cgtctcgcca gctcaaaagt cattcattag atttggtctt cgacaataca cctccatcgn 660 ttaatgtgat ttgtctgagc aaattttggt tggtgacatg gggttgaagc tagtaacatt accgtctaga gcgattactt agcttcgggg gcttttaatc acacaccggg caggtgaatc attecacttt ceteetgact cetteagact ataaaacacg ceactatagt ttagacatta 840 <210> 3136 <211> 1325

<212> DNA

<213> Aspergillus nidulans

<400> 3136

aaagagggag aaggaaaaga gagatattgg ttcgcacaac gagaaggatg tttccagtat 60 aacggaaccg gatatcaaga aggagacaga attgagccta gaggaaaggc agagacaagt 120 cgggcaaggc atgtattaac aaggaagacg tgggtcagtg accccgtcta gatgaccaag 180 ggtgaatgcc aggaaaatgt ccccccgagc ggaccaaggg cggggggaacc agggacctgt 240 gccaagcata aagttgggag agaacagtga ttcaggaaac cccggcccag cgaaagggct 300 ggggaaacca cggaggcatt cttaaaaagg aaaccggggt tattgcttta tgtcccgaac tagtgagtcc ctatcagggc agtcagtcac tttacagatg gtctgggctg gttctaggct ttaagaatag atatgacatc agaccacttg aaaattccta ctataggcga ttgtcctata 480 gcccgaccat catgatgaat tcagtctgat ttatctgtcc tctaagaaac gcgcctgagc 540

cgccgtctct gcggcggatg acggtatgtt aaacctggtc acctggtttc aatgaacgga gatggccgtc ggccgccagc cacagatgat acaatggaag ctgatctcga acctcgtgat ttgtggcttg aacgcagcca gtgactctcg gagacagaag ggataaagaa gtgcgcggtt 720 acgtcagagt ccgtgactgc ggctggtgcc ccgcctcgct cgccagcggc tggtcacact 780 taaaacagct gggttgctct tctgtgcccg gcctcatgat ctctttcttc cttttatcct 840 tcactgcagt cacggccgtc gattagatca tctccatgaa ctactgagcc agtgattctt 900 ctcttttcat ttagtttctc ttaccttact ctctagcgat ggcttactac gatagccgac caccataccc tcccgcagag tatcccgaga cgccctacta ttacgggacc acgcacggcg 1020 ggagtcactc cacggctgtc atgccacatg ccaaccccgc ccccactggc ggaaccaggg 1080 acgcatacta ccgagaccat cctgcgagag acgcatacga atatgggcac ggcgactacg 1140 actogaagog ctcacgcaag agcogtcaca aggcacactc ggcagatcac tacgacgacc 1200 cgtacgacgg atacgagtcg cgctcccgac gatccagaca tcatgatgag cggcgtgcgt 1260 gtaccaatcc ttaggttgaa caagaccagg taagactgac tgaaccaaaa ggccgtgaaa 1320 agtac 1325

<210> 3137 <211> 855

<212> DNA

<213> Aspergillus nidulans

<400> 3137

atccgccact ccacgaaacc tcgcatccag atcctcggta aagtagccgg tagcgaccgc 60 ttcgacaacg ctgaattaca cccagagaat gttgagtcgg tcgaaggtgc gctcgttgtc aaaattcctg aacctctaac cttcgcaaat acgggggacc tcaagaatcg tctccgccga 180 ttagagatgt acggtacgaa ccgtgcgcac ccctctatgc cgaggataag gcctccagag 240 300 cataatcgga atgttatttt tgatgtccat ggtgtgacaa gtattgatgg ttcaggggcg caggtgttat atgagattgt ggatgggtat gcgcaggccg gcacgagagt gttcttctgc 360 cgggttccga accgaagtgt gtatcgtatg ttccagcgga gtgggattgt ggagcggtgt 420 ggcgggatgt cgcatttcgt tgggcatgtt gacgaggcgc ttaaacttac agattcggag 480 acgaggccgt taagtgcatc tagtgcttga ggtgcggctt tggtcagtct gaactatgga

gttggtcggg	gctccaatgc	tgtacgcgat	tgccaattca	atggagtcca	aggccaacgg	600
caggtatact	gccagagctc	tcttatgtga	gcaacgagcg	tatttcgagt	tatctgattt	660
gtgatcctcc	atatagatgt	acaattggcg	ctcacaatta	agctatgaaa	gggaaaaagt	720
taatgtcagt	ccatccttat	atcttatcta	ttcatacgag	tgaaagccaa	gcggtatcat	780
atatgaaaac	cacgaacgcg	taactaaaaa	aaaagaaagt	aaaaatcgac	cttaatttgg	840
ttctgcagca	tgact					855
<210> <211> <212> <213> <400>	3138 486 DNA Aspergillus	s nidulans				
cacgagcaac	gacgtaattg	cgcagggtag	ccaagetetg	cccatggtca	gtcagtcata	60
cgtcctggtg	ttacggggcc	caagacaccg	ttgcatcgtg	tggtccaggg	tccctcgctt	120
tgaatggagc	caaatggact	agtgaaaata	atcagtctct	ttccggcacg	acgcaagcag	180
acgcggagaa	tctggccaga	tctggactag	gtccctggcc	aggaacagtg	taccgaagcc	240
caccgagata	gtagtgcgat	tttacgcggg	gtatgtagtc	aagtttgcgg	actcacaatg	300
tatggagtac	aggaaatagt	ctggtggtca	cttgtgggga	cgacgaagcg	agggacaaca	360
ggaaaatgtc	gagatcaaga	gggaatagta	agactgcaag	acccaaagct	gggcggactt	420
tatgccttgc	tctggaccaa	tctccaggcc	gatataaata	gaatttgtcc	atccacgcgt	480
tggcaa						486
<210> <211> <212> <213>	3139 1101 DNA Aspergillus	s nidulans				
<223> <400>	unsure at all n locations 3139					•
cagcgagcca	agagccggcg	acggaacgca	tgaaacgaac	acagctcagc	cgtagcgaca	60
cgtcaggcgg	cgcccgagca	ggagccacaa	cctcgccgcc	atctgagcga	gcagccacca	120
gcaaaacgtg	cccgcaattt	atcctactca	ctctttcccg	ctccgattga	tcgttctcgt	180

tacctcgggg atattccacc aaagcccacc acaactgccg taacagcacc cgcttctgat tctactgctc agcctgccga ggaaagtaca ccttcaagaa aagaatctca agattcaccc acacccactg aaggtggccg tgaaactact cctcaggaga gcaatgccac gaacaagtca 360 aaaaagaage geaaegengt eteegteace agatgtaate eetaaeeeeg eaggtteaag ctatggcatg gacctagatt atttttgcta cagctctgat agcgaaggag aagcagagcc 480 ttcacctcag tctgaacttg accatcgtag caagactgcc cttcgcaaca ttgctcagtc ggaaagacca gcgtctaaga aggtccgctt tgaggcgagc ccggaagaca cgccatcaaa 600 acgttgtgct cgggctaccg atccttaccg cggaagacac tttgttggaa taggtggccc 660 acagacatca tcaccgtcaa ctacacccac accagagcct catgtcgtgg acccacagca 720 acggcctggt ttcgtcccca acaaatcggg cacttttcaa cttgactacg atgccctctc 780 cgatgactct gacaccgaca ccgaaactgt atcttcaccc aagcttccta ctcctggtac 840 cgtcagaact tccactccta cacagcttga tgcttcacta aggtatgata tcctggcctg 900 gcgcgattaa gccactgtac tgattgatta gtgcccaatc acctgctcct cgttctgctg 960 cgcgttctac acagtcccca tcgactcctg cccccaagat cgaagaggaa gccctcgcta 1020 gggcccgctc ccaggctgag aaatacaaac caaagacgcc tagtggactt cgcaccgcta 1080 gtcgctactc tagccccctg a 1101

<210> 3140 <211> 3258

<211> 3230 <212> DNA

<213> Aspergillus nidulans

<400> 3140

ggacctggcc ctcgttacgg gccaggggt gttggctcaa tctgcgcagt acaaggacag 60 ctaggttgat gcttatgcgg ttgcagatgt gccttcgact gtcgtcgcca atgctggtgt 120 tggtaaaatt tagttgagcc tcgttctctg tgttttgggt tgaagttgat gtgtaattcg 180 ttagttgaat aacagtaact tgcaggaatg cattaagaag acctcgatga tcagcagtta 240 attgtgagat tgaatccatc gtatgaacga agttctgata tggtattccc atatcgaagt 300 aggatcaaac ctagaataat gctcactacc ttagtatcag caaaaactct tgctcaccta 360 gtcctcccgt acttatatcg tatgttcagc accttagacc aatgaaaccg tgcataggg 420

tttgataget tegegegtet acaatgteat agtatetaea attteecagg atgteeaage gccattgtgt agttcgtcat cgattaggca gtcatagaca ttatttgtac tcgtacactt tagggagttg gcaacaaccc ggttgaactc ccgtgaaaaa tcaagcgtag ttttcctggc 600 660 gtgccctgcg acccatccat gtccggtaca ggaagagcaa aacgataccc agaccgacga 720 caaaaacgat gcaaaacacc agaatggggc cgggattttc actggcccag tctcgtcgtt ggaggacttg cctctgggtt gcgatagcga gcgaatcgag ggcgggcatt tctagtctcg tcagtgcgtg ctcgatacag caatgttagg attcatactg cctggcagca ctaggcgcgg attgtctatg tctgtctcag aatcacgacc tttccagtat ctcaattgct tgatgacggc 900 cgcgggacga atgtagtgat ggaaatggtc ctcgaagctt aggctgcaga cgcacgacag agaagagggc cagcgaagac agaagacggc atcgaagagc tgggtatcgc ggatcctaat 1020 gacgtggtgc agagtatatc gtatgcagcc ctgagcctgc cgcgaagttt atatcgcgcg 1080 cccctctgga cgagcttcgc gagtcggcaa gcttgctcga ctattcaggg acctcgctcg 1140 teegeteatt eteagegett teeateteea aegeaeatte eaaaetgata teaaaategt 1200 agccatgata cgagtgatgt ttgatgtcga aggcagcaca gttcctggcg tcaccactta 1260 acgattccgg cgacgacgcg ttgcgaagtg tttgacgtca tggatagcaa cagacatgcc 1320 agtccggttg gagatagtgg ttcgagtatc gggtacgact tccaggatcg agatgcaagg 1380 actaaccgtt tgacgggaag tatcggtggt tatccaggct gcagcaggac catcaggacc 1440 catgggacat tgaagagcag ccgaaggctg atcggcatca ccaagtcacg ggtcttggca 1500 agagtcacgt gtgggctatc gaggtggatt ctgtgaacaa ttgaggtggt tatgtaatca 1560 atgtctgcaa cggacgattg tattgaaggt cttgatctcc taagtacgat ctgtataggc 1620 aatttatacc ttttcgaggg cttcaaaaag aagtttctcg atagccagga gatatccctg 1680 ctatgcaaac gatgtaaatc atcaaacaga catccttgtc atccaaacag tgtaaaacat 1740 caaacgatta tacaaacgag cgaggtgctg gataccgatt agtaaggagg agcctcctcc 1800 ggttgacaga ttctagtgcc gatttctgtc atgtgatcaa tgtctgcaac gaaatcatta 1860 aaattgaagg acttaatctc atatctacag tctgtataga gattttatag ctattatgat 1920 aatteteetg ategteagga gatatgttga teteteeata ttataetgga ggtatggaag 1980 gtcgaccgag gtgctgtata cttgattagt aagatagaga tctcctccag ttgatatcac 2040

gttttcccct tttggcaatt ctggaacacc gcgttccgcc atggttattc tcgctccctt 2100 cctccccaag tacaatcctg cagcactgac ttatggatat ctgctgagct taagtcatcc 2160 ggtctcgggg accgagagcg cttggaattc tcgggccata cctaaaattg caaccgctgc 2220 gtctcggcct cgtatttggc aaattggccg ccaatcaacg atgctgccaa atcctcaatc 2280 tgcaatggca cccaccccgt ctaactggca ggaaggggct gggcaagggc cgagaccatg 2340 attcgacggg cgttgtggcc agcgatcctg gggtctagtc ccttctccca caaaacggaa 2400 tgaaattgac cgtgccttgc tgcaaaagga atcgctcctg ggctgtcgtc cggtccaggt 2460 cgcagtcttg caggtaaagt cgagcattcg tcgaggttgg aagaggggga tttgcctcag 2520 cgtcagatgt ctctgggccc cgtccacaaa ttctcagcga ccccgtgtaa cgcgacctgt 2580 gcaggaggat cgaaactggc gtcccaaaac ccaaacctca acgaaaatac ggaccatggt 2640 tegagaeetg aettititgge egagatatet tgegteeete tigetigtge etegegeegt 2700 cgcctggacg ctcctttggc ggaacgagac caccacttcc tcagtcgaag acgggcaatc 2760 ggcccaaaac tgcacacaaa tatggcacga agaaggtaga cagttctcat gggatccaga 2820 agggccctgg tgtctcaaat tctactcaga tccattatgc gactacagta acggaatctc 2880 ctgcgagggc cgtctctgga aacagcaggc cacgcaaaac atctccgcat tctcqqtcta 2940 cccaatgccc gattcctctg tgaccgcctt tggattcgcc tcgagcacag ctattcccac 3000 aacgaccaca geggegaegt ctacacccac tgatgccaat geegagcaaa caccagtage 3060 agaaaccgcc tcaggcggca gcagcagact ttcggctggt gccatcgccg gtatcgccgt 3120 cggcgccgct gctgccgtcg ctttgctctg tgctgtattc ttctatcttg gccgtcgtag 3180 cagacgcaag gctgctgcgg ctgccgccgt tgcggctacg tcgttaccta gatccgactc 3240 gccatctgcg gccgctga 3258

<210> 3141

<211> 2145

<212> DNA

<213> Aspergillus nidulans

<400> 3141

ggttgtccct gcttttttc tgttcagaaa ggatcttcaa tgggaatgtt agtgtatgga 60 ctgggttgct tgaataaggt gctcggcgct gatacctggt cgtcggagac cttggttcga 120

gtaatgaaat gccattgagt ggaattgagt agagattctg atactaacca atagtctatc gcacgctgag aattcatgcg ctgtgctgaa gctgaagtta aaaagctcga cacaagatgg cccgagetee tgacgegaca acgteattgt ttacgetega egegteaage teegttatet 300 ccgttgatgc ctgagatttt aggttagaat gtacgttaca aaatgctcct gcatagttct 360 gacacatcgt gttaaaatga atacggaaaa tgtccgatcc atccgatcat atcttaaaat 420 cgtgcattag aggetecteg cgtattegee teegttgatt tacteegagt atataggagt 480 gcttggagga actggacttc tgtcaatgca cgatgaccaa tgcaccattt acctaatacc 540 ttaggcgtga tttaccggct taagtcacgg tgcaagactg gctaattctg gttattgagg 600 aaactaagcc cagatagtta tgaaacctga agatggagcc gatattgcga tatagcgaca 660 ttgccttcga attatatccg agacctatat tctctaccta gactctatgc tggggctcgg 720 780 cttgccaggc gctcgagagg cgattgcggg agcagccgtc ctccaatatc acagcagacc tggaactgga acctggccat cgtactaagt gtcgagtgaa aatctgcttc ctggatacac 840 tgggacgtct ttggaaagcc gaagacggtc gtgttaggtc ttgggagacc cttggtgaca ttctgacgct gtatctcagt gaactcgagc ctgaggttcg tattcgtgaa accattaacc tggtgtttaa tagtcagcag ccgggacaag caattcatag ggctaagaag ggtagaactc 1020 atgtttcaga gcaagacttg cagccactgc actatcaggt gatggtggct ttaacggcgg 1080 cattatacat gcagtggggt tgcaccttcg cgagcctgag gctaattaga cgcgaccacg 1140 tcaacgttct tctgtgtcaa ggtctggttt gtcctcaatc cattgtgaga gccgcatgtc 1200 ctegggeeet gtetttgeet gteetgaeee eacetgageg tgetegtett ettgeteaga 1260 ggtctgcact cgggggaagg ggagggaagg agagggcggg tgacttgaat aggctcgtcc 1320 ctttaatctc tgaccgatcc acatggagtt ctcgctcttg tcttctcatc cactgagtct 1380 ccgtcaggac tcttctcgga gaatcctcga tcaagccaat atccatatag gggacgattt 1440 cgatcaccgc acttttcgga tcctgcaaga ttactcctct tcgccctggg ctttctactg 1500 tgcagtggtg gacttctgcg ctgtccccaa cgtgcccctc atcgtgctgt gattcttttc 1560 tattttcata atcttctaat cttcatttca cttatatagc atcggaacta gcaaaagcat 1620 ttgttatctg tctggttttt gtgccttgcg actatttcgc gcgactttgt tacagcgcct 1680 ttettaacag tgegetaegg etcaeggeta taeegeatat eccaecaaet eetttatata 1740 ccgagtcaat cgccctccg gccttacatg gcctgtcata tgtgacctca cgatggtgct 1800 gagcgatgtt gccggtgtcg cagaagaagt cgccgctggc ttccgtcgct ttcgtgactt 1860 tctcccagaa catagtaccg aaataaccgg cctgattgcc gacctgttca cgatcagtac 1920 attcctgaaa acgctagagg agctgtcacg gcaccaccac cacggagcta ttttcaatgt 1980 cgcacgttca gatgtggacc tcgttagtga cagtttgcaa tatactcttg atgatattgt 2040 tgaattcttc ggcgacttag acggccgtag aggcttgact agtcgaagtg catataagcg 2100 agcttgggca ggcatgtccc agtgtttcat gcccgaatgg gcgag 2145

<210> 3142 <211> 964

<212> DNA <213> Aspergillus nidulans

<400> 3142

ctctaccgta gctttctggt tccacaaaca tatggtccgt gattccttcc agcgtggggt 60 cggaaatcat gttgaacggg tcaagatcta tacacggctc ggctcctgcg agcgcctccg 120 cttgaactgc gggtggtgtt gtgatagtct ctgaagcatg tgtatatatt tctttggcgc 180 ccgttttgtg gccagtaatt cctgcggatc ctacaagagg gaagttggga tctggagtca 240 tgcgcgcggt ctgccgagag gaggtgtctg agagagtagc tccgaaaagt tgactcgctt 300 ggggcgagcg gcttgcacgg tcgtagacca gcagctccca aagaagttgg gcattggtgg tccatgcttg ccgggaatgg gaggcttgag ggtcaccggc ggaaacgttt tctcgaagcc 420 gtgtaagtcg gtcaatctat aatgcccagt tagcttacac cgcctctccc tattggcgct 480 aacagaacaa tcaaaacagt tatgtgctgc ttgttgatgc atagcctacc atattttgga 540 cgtgtggcca ccgctgcgcc aacggatgga ggaaacggac acatttggtg aagcctctcc 600 gcgccttctc ccgaaaactt gggtcatcaa cgaagctatg ttggagatga atagtcgcta 660 ctatgaggac gcagtgggca agtgttgggt cgcagacttc gaaccctttg tgctcgatta 720 ggtcaatcaa atgtaggatc cacgcggcgt tgtttgtaat ggtctcgaat gactgtcgga 780 taaaggactg tggcatagtg tgtcggaagc tacgcagtct ccgcgatagc agaaatgggt 840 ggttcagaag gcaggggatt gccaggtaaa ggaactgtgt gaacaaccac ggaccccaga 900 actogogoog ttggttcagc tcatgcaggc ggtgttcatg gaacctattg gcatcatacc

<400>

3144

gata 964 <210> 3143 <211> 1079 <212> DNA <213> Aspergillus nidulans <400> 3143 ttcttttagc ggctttagta tgtgagctag gaggacgatc ttgaatgctc ggcatagaca 60 acggcttgac ggcttaagca tcaactttag cggtctttga gctggtatat accccaaagt 120 tcaaaaccaa ggtcttagtc tcttgcaacc tgaacctagc aacccgtata cagtgcatga 180 aaatctccga tctatgtata gggggctaca ttgaaqaqqa atgtgtagta gtatggcagg acgagaagtc gatggcctga tgtgtgacat gtacggggcc aaaaataaaa agaagagtga 300 gagagagaga gtcctctcaa tcgttctagc gccattctta ggaaagacac cctcttcgca 360 tgccttttag attacgccga ctcatgagac tcccacgcgg ctgtggagca tccgttgtgg 420 agcattggcg cacgaggcgt gagccacgcg aggttctgca tactctacag catgatggtg agttacacac ggcaggtgca cgcaggatag gctctgcact attcaagggg gcacagcaga aagttgcagg aacctggctc ggactgctca atggcccttg catctcccca cagacgacag 600 cccacacccc cttcccacgt tggccacgcg gcggatggtc tgcggtgtga cccctggcca 660 ggccatgcat agaggccct caaaagagct gatgaggtgg gaaacggcag tcatatttgg 720 ttgctatggt cagtcccgca cggggatagg ggtgttgacc tctttgtggg tcacccggtc 780 ccattcaggc tcgtacttaa ctctacgctg gggcatcagg actgaagttg ctttctcttc 840 ctgtgtcaaa accgccccc ataccattca agcaagcgga agtctcagac ggcttcatcg 900 tcacgacgtt tgtctcctcc gagagagaca attctgttgt cggtgttcgc ggtctgaagg 960 gctatgcaac agcgccaact ttagtcaata tcccggtatg ccattgcagt cgccctacgt 1020 aacacagcta ctgatccatg ctccaggtta tcgccgcctc ctgcctgggt ggcgttaca 1079 <210> 3144 <211> 549 <212> DNA <213> Aspergillus nidulans

actaagaaga aagcttttat tttattataa tattattaga ctatactaac ctaataatat 60 tataattaaa aatagatagt aggcaagcct gctagtattt atatttattt tttaatttta taatattaga caggttaatt caattatatt tataaattat tataaaaata gcacaaattt 180 catattatac tagtaaaaat aatatcctag tactaattaa ttagaaatta ctagtattaa 240 gtctttaaaa attaaaaaaa acttagttaa aaagactata ttagagctta gtaagttgca tctataaatt aattcttatt ataaacttgt ctagtctaga tatagtaaga tatttctata 360 aataaaatct aagcttaata tatatagtat taagtctata aaaaactagt atagagtagt 420 taactaggtt atataaaata atttaagctc tagttgagct gtaccctatt aattaatata 480 attagtttat agaaagaaga tatctataat aataaagcta atactaatct aaatggtcta atatattat 549

<210> 3145 <211> 920 DNA

<213> Aspergillus nidulans

<400> 3145

catcctgctc agccaggaca tacgacgata gagtgtggag aactggattt catgttcgtt 60 cagtcattga gcaattatta ttggcagatt ataagtgtaa ctatccctgg aggttataga aatctaatct agggtgagca ggtgatatat gtgagaggct gaagtacagc taggtcattg 180 tgattacccc aagcttaaga ttgtaatagt aacactactt ctactatgtt agacctgatc 240 caaagtattt tctgctgtaa agaggaattc atactttgaa gcggtgcgct gacttgacca 300 ggctatttgg taatagaagt ctctacacat ttacataaaa attacgtctg ctgtagttgc 360 agtggtggta atcctgggga tattaacact cgcaagagtt atgagcactg attttgcaat 420 ttatgagaaa ggtagtaacc taaaaattct gaatccactc caaacctcga actttcgctg 480 tactccagag tcaatttacc tgtattcacg tctgcctgtc cttggactaa taaatgctca ctgcaccctt tcatgaaatt taggctcaat aatttttact cctcttccat aactcccttc 600 tgagttccca gcaagctgga acaatttact ctctcctcgg cgcaacagag gtacactggc acceteggtg ccaagetate atceagtace aaccaactaa cateacetgg tgtateattg 720 gctgctcagg ctgagaactc acgatgttgg caaaggattt aggggactgg gtcaagatag 780

attgtagcct	ggtatgtacc	tgtctctgga	agcattgatg	gtgtgacggc	agtctctatc	840
tgaggagaat	ttgtcttcgc	cggtgctgac	agagtgtgat	tcaaacacta	gaactgagac	900
tactgactac	ttgaagacca					920
<210> <211> <212> <213>	3146 3083 DNA Aspergillus	s nidulans				·
<400>	3146		•			
agttatgttt	ccttttaata	gataaatggt	ttgacttgag	cttcgctgtt	atggcagtag	60
gtagggagtg	attgacggta	gtcaatgttt	tatgctgctg	atggtttata	tgctgataag	120
ggcatgacgt	caagatactc	agtctagaat	ccgaagatca	ctgcgccatg	gcctgggggt	180
ttccccgatt	tctggcatga	agtcatactg	gttgttatcg	cttcataata	agtgataatt	240
tccaggtgct	tcaagtttct	ttttctgcgt	tgcgttatca	ggattaaggg	atttatatcc	300
acatatctgc	ataatgacgc	gtatttgagt	acgtaccggc	tatgctcatc	agcctgccgc	360
gcaataaatt	acttaaaagt	gtagatgatt	gcatccagtg	cctccagctg	cacccgtctg	420
tctgtgatac	actctccaaa	gctaaaatca	tttcgtggcc	tgcttcatct	gttcttccac	480
gcccagttat	tgaagtactc	tgctgcgaga	gatcactaag	atgggcattg	ggaggactgg	540
tccaagattc	gcgtggagca	cttcctgctc	gctataccat	tgaggtgctc	aggtatggcc	600
gacacataat	gtctgatgta	tctaatattc	ccacatatcg	ttgatattcg	attgtgatgg	660
aaaggacatg	gagcgtcagg	ttagttgctt	accgtctcgg	tgacatatag	gctcaggacc	720
ttccttattt	tgaaggagcc	atgcttcaac	ggcgcctact	ggcctgacgt	accctatcca	780
tagtgatctt	ctgagttgaa	gagggtgaag	aatgggtagg	actatagtta	gccgtcaaga	840
cttgaaggga	ttatatctgt	cgaaaggcca	actcacatgc	tgatcaagaa	taccaccagc	900
attaggctgģ	acaaagaata	caaggtcacc	aaaccgttca	taacccagaa	atgcctcttt	960
agaactttca	catcctgaag	aaagttctca	cctgatttgg	agtaaatatg	tgaggtcgca	1020
aaggaacgcc	ttgagtagtt	tgcttatcga	gaaagcaggc	tgacagcctg	ttcctcccaa	1080
caaaacagta	tgacaagtca	tatcagcata	ttttggcgtc	ggtgtcaatt	ttttgactct	1140
ttggcgacct	agtaacctga	tgatctcagc	ggtcattggt	ttttaggcct	cgagtgctgt	1200

ccgcttagat gtgtcgccat aaccctagaa aggccggtgc tagtacgtca taccatccca 1260 gggtaaagga gttgatttgg caactctgtg gctgtatggg cttgagaact ccgtggaaga 1320 agagagaaga gaaatgcgtg ccgttagttc ttggttagag gagagaaggc ggataggcgt 1380 accegtaagt acageatgit getagagtae agettittge gageteagga aageagaget 1440 cgtcatatct gtgccgtcgg gagaagtata gtttggtacg gtgctttatg gcttttattg 1500 tgttgttcat gtatgccaga attagactga cacatcttcg gtacctctgc tggtgttggc 1560 acgtggcaga ctgcaaggct ccctcgattg agtttaacga catcttgatt gtgaaattgc 1620 gaggaggcat tggcctccaa ttcccgatgg tcaaaggccc aggataacga agtctgcctt 1680 ttttgtccag tgctggcgcc agagctgagt gaagtactag ccttatacct ggcgcgatgc 1740 acataattct aagcttaggc tgatttttaa tgcgcaataa atccatctcc agcattccgt 1800 taccactetg egaatggett agegtgagge teatgeaate gagteteeag tattagetgg 1860 actggctaac gaggtgagcc tgacaattcg gaagccctgc tgctggatga gaaggcgtgt 1920 ctttcaggtg ttcttgtata tgtaaacatg gctcctgtgt attttcgtga tatgaccatt 1980 gctcatgtta gaggatctaa gcgattagaa gaataatgtt ggaacgctgt tttggggggt 2040 gaggegttat tatataggta geaateaggt gatgeeagae accatacatt etgeeaacte 2100 actcgctcct ctatttcttt attgtttctt tcccatttac ctactaccta ccagatcgct 2160 ggtccatact tgatctaacc acgacatctc attacttggt gagattatgg attcccaata 2220 tagcaattac cgggccaagc cctgaagatc tcctgacaag tgaagctttc ggcgtccagg 2280 cgtagacgac ttggttatgc tggggtcttg tgcactgagc ggggctctgg atctcgctac 2340 tgagcagtcg gtaagctcgc ttctccctac gtcgcagagg ccgtaaagct ttactaacca 2400 cgactacgca gaaacttcgc cctatacgca tcaggagagt tctagttttg aatctgttct 2460 tctcttcaca ggcggtacag tgggagttca ctctatttat cttttcaagc ttctatcacg 2520 agggtcatta ccgggctgct gattggtgta ttcgccatag tattctcctg gcacgcaatt 2580 cettecetee attgeteace tegacgeace tegttttacg tecaatetea aataacatgg 2640 gcactcacgt acccactgca gcaaataacc cggcggatga acctcgagct atccctgatt 2700 ctccaaaagc ctacaggttt ctcggccggg tcttgcataa cgcgatatcg atctcacact 2760 gcgtgacagc tgcccaaacc agaaatggct gttggagttg aatcagaggt gcaaaaactg 2820

aatcggattc catggctttc actcgatata aatgtcgagt atcctctgcg gcccagaaaa 2880 tcctgtcaaa gtctgcagaa gctcaaccat tttctgggct ttctgactga tatctcggga 2940 cgccatgtct tcagtcggaa ctgacctaat ccctcaggga acggcgtatg gcctgcttat 3000 tggcctcggc gtcctcttct gcggggtgat tcttattgcc atcaaagtgc agaaggccta 3060 tctatccgag gattcagcaa ctt 3083

<210> 3147 <211> 1536 <212> DNA

<213> Aspergillus nidulans

<400> 3147

tattggtgaa attttgtaga aaaattatta gaattgtaga gaaagtaata tgtaaaaagg 60 tgatgggagt agttgaggag atacaaggcg aagtaaaaag taagagtaat agtgagtaga 120 taagatgaat gaattatata taggttttta atgattattt tattgagatg ttgtaagtga 180 aattaagaag tataaaataa ttaggagatg gagttgttat gtggcagata aatgtgaaag 240 ggatagggga ggaatattga taattaggtg tagaagaata aaatagaaag taagtgagtt 300 360 atatataggt tagattaaat tggagaggag gtagaatggt aatgtggata gttgatgtat 420 gagaaaagtg agtgaaaata tgtaattagg gagaagaaaa gttagttgga agtaagaagt 480 taaaatttta attaaggaat aatgtaaatg attagagtaa taatatgatt aggagatgaa 540 ttgtggaagt gatgaaagtg taaatagtta ggatattaat taaattataa ttaattttgg 600 660 agtgggttaa atcaatgtaa attgatatga gctggaaatt ctaaatatca qaqacqqqct 720 tttggggaag catttgcttt tcgccaaagg ggtggagtgc cgcgcttatg tgttaacgcc 780 tegecageea teegetegtg aactaegagt gaetgaeaca egegatteeg acaeeggatg 840 tgccatggcg acaggttgaa gacggcgacg atagtaggcc gttggccggg atcaaagttg 900 ttgagctggt gaggatcata gcaggtccca ttattgggag cacccttgcg gcatttgggg cagacgttat tcgcgtgaac tgtagtcggt tggtggattt gaatgtatgt ttcttttttc 1020 tttatcctcc catcgttctt cgttctcatc tatagcatca agcaggcttg ctaatgataa 1080

taaattacag gteetteagt taaceeteaa egeegggaaa egaacgatag acetegatet 1140 caceetegag tetgacagga etegactacg tgaacteete geegacgeag atgtettegt 1200 ceaagggtte egeeceaacg eeategegeg eaagggatte ggegtgaacg aceteetega 1260 gategetgge eategtggea aagggategt etacgtegaa gagaactget aeggteetga 1320 eggeeggtat eaeggaagge eegggtggea acagateggt gatgeagett eaggategte 1380 gtatgttatg ggeeggagte ttggatacaa agatggeaeg agegttette egeeettgee 1440 tateteagae atgaatactg gtettattgg ggegetggga aegeteatgg egetgegga 1500 tegggegagg tatggagget egtacegagt egeaag 1536

<210> 3148 <211> 3240

<212> DNA

<213> Aspergillus nidulans

<400> 3148

gtagatctcg agtaacgcga aagattagaa agaaaagggg gcaaaacaaa aaagggcgca 60 tacctcgacc ttgaattccc agctggagga attgccggat tagacgggtg cggtgctcag 120 acggggtctt tgacgttgtt ggggggtatg ctccagctga tgctgqcctg ggggagtcct 180 actgtgaagt tgtgaaaggg agccccaggg ggggaaggag gaacttcgcc ttcgaaqatt 240 tcgagaggca tgatgataat gtctgaagag tgtagtaggg gtatttgtgt gacggagagt 300 taggaaattg gagagccact gcacaacgca acatggcacg gatacccatc ggccggatgt 360 gttccagcct tctcagtctg atacgctctc tcgccatgca cagtcttgag cggattacca 420 ccaattccta gccctctagc aagtttcacc aaaagccctt cttttgctgc atgcattgca 480 teceaetegt cataegeggg cetgatattg aaegteeteg cagteateae tatgaetate 540 600 cgcatctcgt tatagactag ggtttgcccg atacagtttc gcggcccgtg ctcaaacggg cgccatgcag ccggactcgg atagagttcg tgcccgggat ctacaagcca gcgctccggg 660 atgaattett eggettgtgg ceagageetg ggattettat ggatggtegg atggattatt 720 tetgegeeaa tggtatggee tagtggatag etattteeaa ggeggteggt gagggtgaet. 780 ccgtcgcgcc cctcacgtgt agttgaggcc ggggggaaca gacgcagggt ttctttgatg 840 acagctagag tgtaagggca ctgatttagg agggctgggt tcgacttcaa aagttgtggt 900

geggeggaeg geagtgtgee aaagataega tegtgetett gtegeaeeeg agetaaaget 960 ttggggtgtt ttgagagcat atgatacacg tagacaatac tactggatgt ggtgtcattg 1020 ccggcaaaca gaaagaggcg gatctggtgg gttgcgtatt gtgcgaaatt gtcgtctagc 1080 ttgctggctt tgccgtcttt ttggtggtaa tcagccaggt atgcctcgag agcgaggcg 1140 ataaccgatt taacgcgttt ggaggtcgag gccgagcgct ggccttgttg catctctgca 1200 aacctcttgt cgagttcttt ccggatgcac ctatccatga cacggccgta gtatttttga 1260 accaggggcc gcagcggatt tgcacggacg cgcgggtccc agaatgagtg ccatttcqtq 1320 atagtattta gegegtgeac catttegtta teagagegtt gatagttega gtecatatea 1380 ctagagccca attagacatg tgggttacaa aacagaaagg aaggctgccg ttgttatctc 1440 acagggtcac cttgagtatg acctccatcg tcagtcgggt cgtcaggtcg tccagatgga 1500 ccaaccctgt cccggccttc tcacgtagaa tatcacaaaa gacctgaacc gagtcaacga 1560 cagtcgacac ttggtcaacc atgttcccag cactgaagcc aggattaaaa atcgaacgcc 1620 atttetteea eteggeateg tteategata teatactegg eeegeeggtg attggatgea 1680 tcagactggg aaaaatagca gacttgggca gattgtactt ggtcgagatc tgcagtgcgg 1740 catcogggtc atagaccata acaagtgcag gaaacaccgg ccaggtatcc atcaggaaca 1800 tttcagtatc ggcaaactcc acggccagtt catgagtcgg caagagaaca tgcgcatcgg 1860 ctggtaggcg atcagtatat ttcttcaggc tgaggagatg gcctgtgagc cagctccaat 1920 ccttgggcat gggctgagtc cattagctac atcgcaatga atgtttgaga tacgcacaat 1980 gcctcgtttc cgcaactcgt tgattttgcg acggtgttga aagccgcagt ataaaccgta 2040 tectatgaet gteageageg ggatgetgag egteageaeg agattagtga eggeeatgat 2100 ggctcaacca gtggcgagct aggtaaatgg ctgaagaagt caatcagctt aacacaagaa 2160 ttattagcat gatggaccag ctttaggcgg ccaatgacgg taatgggggc caggggacag 2220 gaattcgttg ttgttagacc cgctccacgg gataattaaa gcagcttagg ctgaagagct 2280 ggtggagaac tggagacacg gggctggagc tggaacattg tgcttcctat gcatcggttc 2340 gtctcctcag ttcactatca agattattta caatgtactg tqtaqqccta tqtacatatc 2400 agettaagat tggccatttg tittitgetae tiattgtieg tattetteea tactegeeat 2460 catgagttte gacceegace geceettega caacateatt aattteegeg atgteggeeg 2520

<210> 3149

<211> 3521

<212> DNA

<213> Aspergillus nidulans

<400> 3149

cgagctaagt tgcccaagct gctcagaact acaggatcat ctggccctag tctctttct 60 ctgacttcca gcagtctgag ttggagctcc tcaacatgct tccagtgacc ctggtcccac 120 agtgtagcca ccacacactc aagactctcg agagtatcag gatggtcgtg tccaagccgt 180 geteteettg tetecagaat ttegeggaat agaacetetg cetegeggta cettecatea 240 ctatacaaac tctggcccac tttctgcacc agtctctccc tgtccggtgt cctagcttga 300 aactgttcac acccaagaat atgctgtgca tgcggtaggt atctcctcca cagcatgcgg 360 ttctctggct tgctttccgg aaaaatatct ttcaggtgtt gtccggcttt cttcatccag 420 cattctagcg tattttgggt tcttaaccag ttttttgtca ccgagtggac aagttcgtgc 480 agactaaagt attgaatacc actctctgag tgctcagata tgaaatagta tccttttagt 540 acccctaaag cgctctgctg ttcaaccttt gactgtgcgg ctggaagcaa taaacatggt 600 atccaggcaa agtcaaggca ggacatgaat gataagtact ccacagccag tgggctcatg 660

gtctgaatct gtctgaaaga gatgagccat gctgaggtta tagaattcgc ggtccctaga tatctccact cgtcctcaaa gtctctgctg agcaactcta gcatcgaagt ttccgtgtcc 780 ttgataagtg aaaggtatgt ttcagcggag atcaagtttt cattgatata actagcggct 840 tggacgatcg ctaaaggtat gaaatgtaag tgtcgagcga gaacggctgt agatgtgtca 900 ctttccagca agctctgatc aaaaacggca ctttttaaca gagttattgc cgactgaacg 960 tccatctcat tcaaatcaac aatgttcggg ccagcaactt ttgttgcaag ctggtgattc 1020 cgggttgtaa agagaataaa cccgcgaggc gatgtcggaa gagtgtctcg gatcctqqac 1080 gctgaccata atcccgaatc gtctgcattg tcaatgataa gcacccaggg accagccgta 1140 tetgaattea agtaceett taeeeggtet tttacattat etggggttat ggatteeagg 1200 cccaatcggc tgccaatatc cataaaggcc tgctccaccg tttcggcgct ggttgatgag 1260 atccagatta tagagtatgc ttccggcttc ttgtgaagac gataagcaag cttcagcacg 1320 atctgtgtct ttcccacgcc tccaagtcct gctattgcgg ctcttctagt cccactgttt 1380 ccacccgtat caacatctga aggcgggaga gctcgcgctc gcggcccaga aacagcgggt 1440 tctgacggaa aggcactata aaacatggtg tacgttgagg catctgtgaa ccgttactgc 1500 tettagettg aggaateetg gacageagga tetttgeata ggeageggee gteaatgaag 1560 cataccettg ccaatgetta gatttgtggg aatcacagta atcacagatt ccacggataa 1620 ccacagacgg gagctgattc accagcccag cggcctccat ctcaaaacac agggcccat 1680 getttttage taggeggtee eggeteaegg egtetetgat caactggttt ceagatgega 1740 tragtrogta gtgraccoge ggetettetg attgregtar tgaacggteg accaaatace 1800 ttgtatcaca tttgccgcag tctgcgtcgc ccagtgggtg aacatattcc gcctggaata 1860 aacggtcgct ggagcgctcc ggcttgcaat actggcttgc cactcctgaa ttcqtcttca 1920 aagctgatga gactaggete aggataeeea gtggttteee cattatetet teggettgga 1980 gttgtgatat tgcgttcaga aggactaggg gcggccggtt caatattcca gtcactttga 2040 attegerate accgaggace tteccaaaat cataggeaac caccecacte gttecetetg 2100 aagtaggttt gctgaccaca atatctccaa gccacatgtt attgtctacc gttcgcggga 2160 tecegeegee caegeegace attaaceega attegaette agtgaatgtt gagagaaget 2220 gtgtaatcac gacagccgta gagatagtgc catatgctcc cgatggcaaa catgctaaca 2280

cgacattatg gcctgctatt gcacctagag tgtagatatt ctggtcattg atgagttggg 2340 ggagtcttgg atggacctca tccagcatcg attgcgcagc ggcagcctca aggggtagtg 2400 cacacaccca ggcaatccta taatctgttt gtcgtctatg ttgctcgggc atgatggaat 2460 aagaataaca atattttggg cttgatcatt tgcaagctca ttaccaacag aagaaagagg 2520 aaaagtggta aggtgggaca cagccccgca acacgtggcc acgagcttca gcagcactgc 2580 tcatctctgg ccaatcggaa ttctagcttt tatcagggat cttggatggg attccgagct 2640 gtgtgaccgt gcgcggccta ggatcgatag gctttgccga ccgggctaag ctcttgattt 2700 tgggaggcgg atgtggccat ggttgaaggg aggtaaagga ctatatacat taagggcatc 2760 aaggcagggg caaagttaaa gtggcaggct atgacctgta tctgaattag ggctagcttt 2820 aattgctata atatttgata aacaaaaaca gaaaacggta ccaataaggt caattacagc 2880 ccttctacaa tgaattaccc aagtatatat tctccttaaa tttccactaa tcccttccta 2940 ccttacttgt attgaatttt atattaactt ctctgaaatt gtacagaagg tgatctcatt 3000 aagcattett accetggtaa tggegtaage tetgegattg cattgacatg cattgacttg 3060 ccaaatcctg ccaccagcca tatctgatca gtatgaagac tagtcagtct aaggactgat 3120 ctcacaagag aaagcaggac catatcaggt atatcaaaat ctgtgagtca agtgcaaagt 3180 ctttgctgtc aagctatgat gagataacaa gttgtatgaa tcgcgaagcc aaggctcaat 3240 acagtagtag tgagtcctta tatatccttt cactgcgtag gcaggcggca cggcttaggt 3300 aagtcgttcc ctcacgccaa agtaggtcat ctactttcgc gtaaggtgag tgcttcaacg 3360 gctttttaat atcacctatc ttcaatggct tcaaagggac cagattactt caactggtga 3420 atctacgtac actccttgcc agaattagtc tctcaatact acgctattgg cagcgctgct 3480 tttattttta ggatgccttg ataaatactt cttattcgat c 3521

<210> 3150 <211> 2039

<212> DNA

<213> Aspergillus nidulans

<400> 3150

atgcgagaat agattatgtg cagagaaatc cgcaatgaga cgatattagt gagttcgtac 60 gacccgacaa tgtgttgaat tggctaacac tggcgactgc tcagcccttc agaagcgcgg 120

cttgacatcg ataacgggga tgtagtactg aactgctgcg tccgcaattc ttccgtagtg attaggctag agtacgtatc aataagcagt ccattaacgt attctgagtc ccatgcgtgt gtcaataaaa ggtaaggatg gcgtaagaga caagcctagc ggccaggtaa taaaagggac tgggaaatgt cagctcgaga ttcttatttc tcgccaatgt tggaaagata cggcttcgtg 360. cgaggctcca cgctactcaa gtctcccttg tccaagtaca gggatttagt ttatgaagga 420 gegegaactg acceaacteg ttgattaggt caagtgegga agececatee tagteaeggg 480 ccacgttcct ggattcagtc gaaaagcggt caggccaaca acgggcgata ttgtccqqqq 540 aaacttattt ttttcacagc caggtcaact tttcttaaat ctagacccta cagagtgaat 600 acaacaacaa tatcctcgca gtctagttgt tatcacattt accagctttg tttgagcata tacccgctct tgttttgtac tggctcagat tttctgcaat tatcttactg cccgacttta atattttggt ctctggttca acaaatgggt ttgccagcgc cccgcaagta tgttgtgctc 780 tatgttgcgt tcgtaatcaa tcgctgacaa gaccttgagt cagaaaaacc aagatctctc 840 atgateceaa taataeeaat tggtegeggt caacaagtgg etteggaeat aaaattetea 900 gttcccaagg atggactccg ggaagtttct taggagctcg taatgcagcg catgccgata tgtttactgc tgcaagtgcg tcacatatca gagtcattgt gaaggacgat accctaggtc 1020 teggageacg ttegaaacgt gatettetag acgaacetae tggeettgat gettttaagg 1080 gcttacttgg aaggttgaat gggaaaacgg atgtcgaatt acaagccgat cagaggaaaa 1140 gagacgatgt gaaactcgct cgttatgctg ctaccaaatg gcaagctgtt aggttcatta 1200 gcggtggtct cttggcgcag gaaaaggacg aatccaaaga gactgccgag tgcacactaa 1260 agtcaggagc aaagaatgca aaccctgtcg ataacaattg tgcagatgac aagacttgcg 1320 ccactgattt gtctcaagat tcgaagtcca aaaaccgacg agctaaggac gatgagaaaa 1380 gtgagaaaga gaaggagaga aaagacggga aagataaaaa ggacaagaaa gacaagaaag 1440 acaagaaaga caagaaagac aaaatggata aaaaggataa aaaggataaa aaggtcaaaa 1500 aggtcaaaaa ggacacgaat gacaaaaagg acacgaatga caagaatgac aaaaagagaa 1560 agegageaga geaacaagag gactetgaca accetgtece aggeecatea caegeagtga 1620 aggaacatcg tccacctgga agacatatga tccgaggtcg acatattgcg caaaagagga 1680 aggetttgat ggatgataag tetttaaacg aggtagtgee eccatteate ettteagttt 1740

ccagtggcta ataaatgtag attttcatgg taaaatcgta aatattctt gttattcaac 1800 atataccccg atcaccctga gcatcattgc ttctatcagt ttcagcattt aatagagcat 1860 aactttcgag gcatctaagg cagcgatatg tagtgagact tcaaattctt ggaaaattta 1920 aaaattatta aaccagatat cacgaagtaa ctttatggat tggaactata tggtcaaccc 1980 ctgataagag gagagatcag gagcctcggc gtcgtgacta atcagagcca aactatgac 2039

- <210> 3151 <211> 2260
- <212> DNA
- <213> Aspergillus nidulans
- <400> 3151

acgaatagta taagcctctc gttcaaatat tqtctqattt atqacctatq aatqacqqcq 60 gccagcgtcg ggccgaaccc cgtcatccca tactctatgc ttacgtagct gcacatcata 120 ggtgatctac acagccctgc ggcgattgta caacaagatt caactccgat ctattgccga 180 aagccggttc ttagcaaaaa aaaaaaaata ataataataa ataataaaaa taaaaataga aataaaaata aaaaaggtct ggttcttcaa gaaggttgta ggtagttcca gcattctgcc cggttaatgg caggagactg gacgatcatg ccattgccga aagatgccga gtactacaca 360 ttttgtgtgc ttgctcgcgt gcttgtttgc cttccaacag atgatgcagg agtttgtttc 420 tcgtcgaatc agtactatgc tttcctgctc caatatccca caggttatgt aggcatccac 480 gaccattgac gttatccagg tgtatacgtt atttcaggct ttcaggctta accaagcgca 540 gctacttccc cgtcttacct agcattatat ggttacataa ataatagtaa tgataaaaga 600 agaagacgaa gaaaagaaga atagactctc atatttgaac attagtcatt aatgggtatt 660 attaaaacta ccttatccca tatgcatatt cgtatcccgt aaccagtttt gcaagaaaag 720 aataactett aategagtag gaccetgtte caateegtet tgeecacgae atecaceatt 780 ttgacccccg gtattccaaa attttctttg cttaacgtcc ccggctgtgg agactcggtg 840 aaatagcttg tctttgcggt tcatagtgta cagccagaac aacagcgtct cctccagcat 900 ctccatgcag cccttccgga cgcgaacgga cggatcggcg ctcccgacgg cqccccagga gacceggaac ggggtatgat gettetteea eegactgaee gegagtgtet qqaegaggte 1020 atagagcage eegaacegga geeeteeete gtgegaagea teaatgtate eettggegae 1080

tgaggtcggc gactcgtgat cgtgcacatc gcggacatac cccacccctg gctgcggtgg 1140 ctgggagacg agcatgcggc gccaggaggc attggggtgc ctgaaggctc gttctcgcgc 1200 accorditing transporting according transporting according transporting according to the second accordi ccctgcgtcg aggtagaccc agtctgagag gcattggcag gaatctgagc cggtgttgaa 1320 gaattegggg ceaaactget tgacgageag egggtteage gtagegegea ettgggegeg 1380 gtacgggctg agctctcgtc gtctcgcagc gccgagaggt gtctttggga acgcggtata 1440 ctgtctcgat ggtctggcgg ggggtgcgat cggtctgaag aagagggtct gttgtaaccg 1500 tggcgacgtg gagatgatat gtagccagcg cctgtttact cgttgcgcgg acgtgagcag 1560 atcctgcatg tccagatgga ggaggatctg ctcaaggagt tcaggtattg agagggctct 1620 ctcggtcgca aatatgatgt cgacgactgg tatccccatt gttgtgaatt aagtttgatg 1680 attttatgta gaattcgaaa gataatgtaa tgatgacctg atggtttacg ttagtagatt 1740 ttcttttgaa aaattagaat aatgtaatgg catggcaatg ctatgcaaga ctatactatg 1800 gtcgggttag cattcggggt tctatggtgc cctataaata ctctgggcgc gaccattgtt 1860 cgactcctgt agaaactatg acgacgaatc caagtttcga ttgccacaga tgcgtgcttt 1920 gtaggtcata agcggggttt tcggcctata aaattcggaa gagggctggg cctgcatcgc 1980 caattaccaa atgccaagcc ccaaaccacg tctggaatac gacggagtag agctcgaggt 2040 tggggcttta accaagatcg acgctctatt aggtaaggag tgcctgacgg tgctcagctg 2100 acgcgatcag acagtgttct ggtcggtcga cgcgatggag atagacgtgc acatgcaatt 2160 gcagagetgt egagetgteg agetgtegag etgtegaget gtetageeaa egaggtatge 2220 2260 ccctgacgag gcaactgagt ttgttgccgt tgggatagtc

<210> 3152 <211> 985

<212> DNA

<213> Aspergillus nidulans

<400> 3152

ctcccgaaga ataccgcagt aaagcgaaac gaccggttca gaaatcttcc tacaggatat 60

ttgggaaaca cgtcaatgac tttgaaacta ttctgccgcg gcagatatct tccaatgcgg 120

aaggatggcg ccttgaagcg tggatgcgtt atgaccctcg tatcactgct gaggacatca 180

tegacegggt ceateegtte tacegaaaat acatateeag egtacaaate cataategte gcaaagagtt ccgggagcat tgcaacataa cgtgctggga agcggggcct gatgacaatg 300 aaaacgtcaa aataactaat ctcctcgaag agtgcggtta tgaggcctgg tcgacaaata 360 gcactcgtgg gttatctcct ggtctaatca acccgacagt tggtgaggca ggaggtcgta 420 ttgcgctgca ggaggttctt gtccgtcggt ttgatgcgcc tgactccatc gcttactggg 480 tctatgaggc tttcccgtgg gacagcgtga gtttctggtt ctctgcaggg ccagtacgct 540 ttataatcqa cqtccacqqa aatatactqt cqtctcatac ttcctacqaa tccqtqattt 600 ctcgtgagct gtacgatggt atcatatctt catttcaggt tgcgcaccct atcgatgctc agcaagccaa acctaatcac cttcctggaa atcttcccga ggcgcaaccc catgaaatgg agtttctctc gtcccaaatt gctctgccgc cggctcaatc ggtggtccat tttgctccgg 780 acgtggttga gctccaaccg cgggcgatag ctatcccaca ccccaagaaa cgagcacctt 840 ctgatgctac tgccaggtaa gatctcttcc aacattcttc gtcatattac aacaattacc 900 gacaattgcg ccatcattag tgccgctagg agaatcaaca tcacggaaat catcgatccc 985 agtggcctac ccacaccagt tggcg <210> 3153 <211> 680 <212> DNA <213> Aspergillus nidulans <400> 3153 tecattatat atacteteta aaaceteatt egagetgaaa agegaaaete aacageetet 60 tgtatagggt atttggcgta ccgcttcccc ttcatattag cctttcgagg cctgtggttc ttcgaaagga ggagaagaag cattatatgg aaagtcagga tagtctgata gtcgacagcg tcacacaaaa aaatggcctc ccattccatc caaaccattg gcgtcatcgg caccggcgtt atcggctcca gctggactgc ccttttcctt tctagaggtc tgaaggtaat tgtgacagac 300 360 ccggctccag aagcagagac caagctgcgc gactatctgg agaaaacatg cccacttgta ccaggctgca ctctaacact cgagacgtgc ctgagtaatc tgacattcgt gaccaacatt 420 gatccgtatc tcgagatcgt ggattttata caagaggttc gtcaccctta ttacccttaa 480

540

atggcgcttg ctataatcac agagtggaaa cctcattgtg gtgaatcaga acggcccaga

gagactccct	atcaaacggt	ccctgatcgc	ccacctagac	gccctcactc	ccagacacat	600
tccaatcgtc	tcctcgtcct	caggcattcc	ctcatcaatg	ttcatagcgg	actgcaagaa	660
taatccagcc	gggatactta					680
<210> <211> <212> <213> <400>	3154 4010 DNA Aspergillus	s nidulans				
atgcttttt	atcgagatgg	cgataattat	taataaatcc	aggcatccat	cagctcacgg	60
ttgccgctat	tctcttgact	cttgcgcgac	ctgaggcatc	gtttctgtct	ctcattttca	120
tagattccgt	ccttttgttt	tatattctcc	ttgctatata	taggcatagt	aagtctgagg	180
tatattaaag	taatgagtat	tagttatgac	cgtagacgaa	gaatctgaat	ttcataacag	240
agtggtgctc	tgaagtatat	agatagttca	aacactggta	gtactctgct	gtagctttga	300
cacgaacatt	tgcaatacaa	ggattactaa	atcacactca	gatgggaaaa	gaggttttca	360
aatttgccca	aacacatact	aaaaacatta	atcatacgca	tgtactgtgc	tcctaagact	420
gcatgaagcc	ttagccacca	agtacagagc	agagtcatgt	gatgactttc	cgggaaagag	480
cgagcgggtt	tgaggcatcg	tcgtcttatc	gggatctaga	attttgttct	tcagacaact	540
tcccactcaa	ccttagcgat	ccgtcgaaat	gactagtgac	gatcagtttt	ttttcgacta	600
tgtgcgtacc	tccattatcc	ctattgcgct	atagctgagg	tctaacgact	gtatattcgt	660
ccagcttgcg	tccgttcccc	atgacgtaag	aagatatgcg	aactctgtgg	ccgaggccat	720
tgaccgacac	gtcgaccacg	ttgcggacgc	agttcgagat	acgctttcgc	atcaatcatg	780
gctgcctcca	agtgtcaggc	catcaccaat	agttcgtcat	ttctcatcgc	ggccgcaatc	840
actatatgat	cgcgtgcaca	gctgggttat	acagaaccga	gcatggagcg	ccgctatcct	900
agcgttcgtg	ggcacgaccg	gtgtcctgta	tcttggtgat	aaaaagttga	ggaccaagcg	960
acggaaggca	aagcgatctg	ctaatggtgc	ccggaaggag	ataataggta	agccgcgggg	1020
tttttggaaa	ctatctcacc	tgcgctcgag	gctgaccact	gcttagctgt	tgctgggtcg	1080
ccgcatgagc	cgatgactag	gtcaatagcg	gcggatttgg	atcgccgcgg	gtatatcgtc	1140
tatatcactg	tgtcgtctgc	agaagaagaa	caccttgttc	gggcagagaa	tcgccctgac	1200

atcaggcctt tgtggctaga tttgacaaca gtaagttgca tacttctctt caatcagaaa 1260 cagtcgaata ctaacctctg cagctcccgt catcgccatc ggagatacac tcttctttga 1320 atgagattca cagcctgatt actcaaccgc acgcccccat ggctggagtg ccaccgcatg 1380 tctgccagtt gagcggactt atactagtcc cttcgccaaa gttcgtagcg ggaccagttg 1440 ctacgattcc accatcatcg tgggtcgata ctattaacac acgccttctc tcgcctattt 1500 taaccaccca gctctttcta ccgcttctta ccctgcgcaa caccaacagc actataattc 1560 ttgtataccc gtccatatct tcatccctct cagcgccttt tgctggacct gaagtggcca 1620 cagcccgcgc tctgtcaggc tttgcgacat ccctgcgaag ggaattaagt cttttgcagc 1680 accacaatat tgacttggtg gagttgaaac ttgggaatat cgaccttggg ccacagtacc 1740 gggcccccaa tagccatatc gcaggaaccg aagtcctcac ttggagcgtt caacagcggg 1800 ctctttacgg accacaatat ctcaacagca ttgaacaaaa accggtagcc tcagctggac 1860 ctggttacat acggggatcg cctgctaggg cgcttcataa tgcgctgctt gatgccttgg 1920 aacccacatc taagaatatt tttggacagc ggacagcgaa gaagcctgtc agatacgctg 1980 gaagaggcgc gcggacttat cattggatcg gacagtggac gccccctgga ttagtgggtt 2040 ggatgttagg cctgcgaaaa ggccacgcat ctcctgtcga gagggctagc gagagtggca 2100 gcgagactgg ttgggaaaaa gttgaccagt agagacttgg gctaaccacg actataatca 2160 gactgtgctt gagagtacat ctaatatgtg aatataagca tctctcctct ctggaaaagg 2220 aatggcccgc ctaggctgat ctacggctga gattctacgc cccttccaaa gcttccacaa 2280 gatetaagaa tgatetgeta getatetget agtgatagee teaacggata aatageaaag 2340 tataaccgac ctcacaccga catgattgcg gcagcggtgc acggggagtt tcgaagtaaa 2400 cccaacactt cgttacatcg gtcgactcag gaggctgcag tctgcatgaa ctgtagacca 2460 tggcctctca gctagaaaac gtaagtctgt agcattgatg ccctaactga gacaattctc 2520 cataagattg gtggagtagg tctgtctagg cgtccggctt ctaagacagt ttcggcaagc 2580 aggagattat cacaataacg aagactetee tttgetgtea egteatatea egaagtaaat 2640 tgccaatagt gggcggttca gaccatgctt gtactgacta tgaagagggg tagcacagat 2700 cactttttcc atatctcgtt cacataccct gaagacatcc aggctgtctc aggtgggagc 2760 tattgcaatc aatctgggtc cagctgttgc gattccaact tttcaaaaaa taaaaatagg 2820

ttctgctccc atttcgtccc caccgaccag gagttggact gaaccactat cgagtcgccc 2880 gtggtccgac ggtttcatac tcaggaggta ttcgtctcct ggcgatctga gtggtagttt 2940 gtcacagccg aatgtccatc gtttagtcta gaattgtgaa gcaactcggc tactttgcgc 3000 tececteecg ttgattgtta egagtegget gaagteaget tatgaetagt agaaageaca 3060 ggaggagcga agtcacggaa cctgacagcg aagaatgcgt ctccaatagt acaatcgtca 3120 ttgctcgatt tattcgtctt tatattaatg ccagcccctg actgaaaaaa cgagattctt 3180 ctgcgacgga ctctcgctta caatacaatt ttgtatctgt atttaaattt taattacaaa 3240 taaattacat tattatgtag aaatttgtct gtactaaaat cgtactattt gttttcttgg 3300 caaggaatac attgcggtac tcctccacat tatcagcccg cctttgtccg tcgagttggc 3360 gategicaat egicaecagg agegegicaa aattecatee iggiteeati qiteticige 3420 cgtcgtctgt caagactgtc acatctgcac aatcttctgg atgctcatct ctcccttcca 3480 gttgccactg ccatttctcc acaggcactg cgcgatgctg gtcctggccc agaatctagc 3540 atctcctatc taatcgcccg cccactttta gtcttgtaca gaaggactgc ggccttgtca 3600 ctccttacta caaccacttc aacttgcaac ccgatcctga cctactgtcc gacactggtg 3660 accaactoty cogtotottt ctottyggot gtoactoott cagtaattoo gccotoottt 3720 gatettttgt tgttettteg ettettett tetteecee ceetttteag ettgaaatae 3780 caccaacgcc tgccactcac caatattcag accettcaag ctacaaccat tgcgactgtt 3840 ggctcttgtt attaatgcgc tctcgttgac ttgccgaccc gttacgatcc cggttgaatg 3900 agtttatggt ctctcgcctg ataatacttc gcctggagcc cggagaccgt cgtcctgtgc 3960 cagcgaagtg accatccaca tggctacgcc gagtcgaacg tcgctttatg 4010

<210> 3155 <211> 3944

<212> DNA

<213> Aspergillus nidulans

<400> 3155

taactgtgta ggttcaatta cgaacacttg ggtaggaacg caaacctcgg ctacctgcaa 60
teettgtgce ggtgtaacge ggtacccace cgtcagaata gcaggccgca gccgaagcgt 120
ttcgttaatg atgtcgtcga ggtaactgat agttttgatt atgtcataag tccactccga 180

ggacccgccg ggcatggcct cgtctaggag aagctgaagc ttcgctagga tctctggatt tttacagaga aagtagagga ttgaggctaa tgttgtggct gtggtttcac tgccggccac tataactgct cgagagtcct catgcagcgc gttcgctgtg ggagcagccg acacctcctt 360 gtgtacgtac gctttcaaaa gccacgaggt tatatcttgc ggcgtttctt tgatgtccca 420 gctctttatt ggttagtagc tctcttctag cccggagctg gtaacgtact ctgtgttttt 480 gtacgatttc atcttcacac catttaaaga attcggccat tgaaaaactt gctccaggaa ggttgctaat cagattcaaa agccatggga cgtggcacat Cactcccagt atagccatgt 600 ggtcatggat ggctttgatc cccgggtgtt ccacgccggt ggacaagtta ttgaactctt 660 ttccgaaccc aactttgccc attatatcga aactgaggaa catggaccac ttggtagcat cgattgcccg ccctctgttt ttctcgatgt gcaagaccag aagatctgct ttggctctga tgctcggctc gtatgttgca agggctgcgg tccacggtaa gcagccggac acgggttcta gettgagatg aaaacecace tttgaegetg agteegegat eecaegeett aegeegtetg cgatgatect agaagteacg egtttggtgg aegettgeag attetgeete tgtttgegee 960 tgaacgtaga atgttgattg tccgccttta gactggggag ataggagcag tgggactgcg 1020 gatttgcgga cgatgcatat ctctcgcggg ccttgatagg taatcaatgg tctcctcatc 1080 cgtactcatg gaacaggctc accggttctg aaaaagtctc catatctctt gtgcatttcg 1140 gcgatttcca catggtattg caggcctttt ccagcaaggt acgcatcgta gaaacgagaa 1200 agtttggata gccgaggacc aggaaagcga cgcagacgat ggaagaacaa ccgatagatc 1260 gcgatgctgg atgctagacc tgtattaaat gctgctgaga tgcatcccac acggagaaga 1320 acttgtagcg gggaaaaggc tgtagcagta agatataaaa ccgttacagc aaccactgtt 1380 gcagtatata aaccgagcag gccatataag tactcctcca cgggtaaact gcggaacaat 1440 gagacatgga aaggacgccc aaagttgcag ctgacagcag aagcttggaa atatcagtac 1500 ttgaagcatg ctgcaaggct tctctgaaga gtaatgaatt catagtctgc tgcagtggaa 1560 taggttacta tgaacgcgtg agttggtctt ccaaggagga aaggacgggg gttcgtattt 1620 aagacataaa tggcccacca tatgagcagg gcttgtttga tagagataac ggctttgtgt 1680 tgatacatta gcctgccaca gttgacgcca agtaggctct gcagatgcag attttagtaa 1740 acctgtcaat gacttgagcc aatgcaatgg cctctgactc tactccaccc cggacacggc 1800

ccgtaaccgt ccgctttggg gttgttaagc agccacggtt gtgcggtcaa gggggcacac 1860 aaaagtacac gtatctctta ttgtgctcct ttaaggtcca ggggtatgag catccaatct 1920 cagcccaccc aacgggaatt Cagttcattt gcaatcacat cgcaccctac cttcccgacc 1980 gcctggaggg acacccgcgc gtctcatatt ccagtgccca tttcatgtca ctttcttcca 2040 ggccttcgag cgctgcttgt tacgctcagg tttagcgaat tgtccaagca accttgccat 2100 ccgtatagca ctgtttatcc ttgagagccg gatgccacca catcggaaat catcgtacgt 2160 caccgcggcc aaaaaggctt agcggaacag ctttggcatt cagaccgcga ctctgcagaa 2220 tgagagccac cagtttgatg aagacgatag gttgggacgt ctgtcgagtt tcgtcccag 2280 caacattagt ctctcccaca ctttgcaaaa gcgtgctctt tatctgacaa agggaccata 2340 gtggtggaag gaatgcgtga Cgcactgttt gattgcactg cacaaaatat caagcggact 2400 ggcgcaccga ctcgaacctg agaaccaaag cagccacaca ccttcgacga ttgttagtga 2460 atccagggct tgcctggctt tgatcctaag tggctggtac ggtggcgcag gagatgcccc 2520 tgattgttcg aatctgcaac aacaggatgt tattgcggag gcatagcgca gctggaagaa 2580 tttgtgacca cggctgagac ctttcaccca gctttatgta tgttctttct atctaagcca 2640 cyaataaaca agggaactca gcccgcccgc accgggaata tcacccggaa gcagacaaga 2700 gacttecata ggeaceaaca attgetette teeegeaaag teetgeeegt eegattteee 2760 cctcttcgtc aaccccggcg ccacaacaag aagcacctgc tggtcaactc ttggcctctg 2820 ctgtcctttt tcggcttcca tgaattcagg gttaaaccta acatgagcgt cgacgggcgg 2880 gaacteecaa gtgaeeeggg eagettgaeg atggatetet egateaageg eaattgeatt 2940 ttcgagaatg cgtcggaaat cttggcctgg ggcgctactt cgtatggaga ggtactgccc 3000 cgctatagac cagaactcct cgcggatctc tttgcgcgtg ctttgcatgc gcttgtattc 3060 ctgtgagcct tcggtaaaat cgcacatttg aaggatcaag gccgatgcct cgaaggacca 3120 gatttggaat ttgcgttcga ggtcggggtc ggggactggg tcatggcggg atgctgtgag 3180 atcagtacat tgttagtgca tcaggaggtg agagggcaag gcacgcatac cgtatttcag 3240 atagaaccgc agatcgcaga gggattcgcc ggctttgcct gcccatacaa agctcccgaa 3300 aacccgacga tccaatagct tccacactat ggcctgaata atgctggcgc atcggcttgg 3360 tgacctgatg tactcctggt atgcagttgt tcctggggtg gtggaaacca cacatgattc 3420

ccagacgtct agccggtctc tgctaacatg gctgcagggg attcccgtaa agtactggac 3480
tgcgaaatcg cggatgctgt acctcagctg ttggatgaga ccggtcaatt ggctgcggt 3540
gaactggtag tggctgggag cttgtttgc cttgcgcagt tcgcgggctg tttgcttcca 3600
tagtttccag ttctcctccg cctgtgctgc gactttgtct cgttcgttga ggatcgtttt 3660
ggtgagagca cattgttctt ccagctggcg ttctaggtct tggatcctct ttctcgactc 3720
agcatgctca agctgtagcc gctgaagttc gtcagcggtg ttggctggct gttttccttt 3780
gatgggttcg gtagcaggac gcgtgactgc agagttctgt tgcggtgcct gctgctggtt 3840
tggaccacac ttgatagtaa tctttggttg agtattagtc gcccgataag aaggcaggga 3900
ggcagttcga acgtcttgtg agggcaccga gtcgatttt atag 3944

<210> 3156 <211> 500 <212> DNA <213> Aspergillus nidulans

<400> 3156

caactcaaaa ggctgagggc cggcaaatac cccggacttc aacctcatct tccttaacca 60
cggcccggag tcccatttgg agaatgggtt gtgtggagga gtggccgggt gcgcgcgag 120
aaccagagtt gttggacatc tcgagtcgtg acgatctggg ttgaacttgg actgttctca 180
gaacgggtgg aaaccgctag tactggcctt tcgcatccgg cgcttgaggc caaaccctgg 240
tcgaactagt gactggctat attaatacgt cgtaatacac cgtgttccgt agagacttcc 300
ccaatagatt gctgtgtccg tcgagaagtt caaccgagat tttgcctggc tttcgcctgg 360
ctttcgggcg gtatcggggt cggtcaaccc aacacttcat ggcctcatca ataatgcctc 420
atcgataatg ccgtgaacgc aggtcttctg ggttacttgc tatttccgaa ccgtatttcg 480
taaatcaaat gagaaggcag

<210> 3157 <211> 1154 <212> DNA <213> Aspergillus nidulans <400> 3157

tecetateeg ateettatee acageaacet acetttetaa ggteeaagaa aggatteata 6

taagacgagt	atgcggcgcc	tcacatgttt	aagtgctttc	tttctagcct	cagctagtgt	120
ggctgtcgcg	tccccttcag	ccgagcaatg	ggccgagagg	tcgatctatg	tatgtccctt	180
tacagcacca	gcaccagcac	cagcaaccaa	cgctaatatt	catgacagca	agtgatgaca	240
gaccggttcg	ccaggcctgc	aggctctcct	ggcgacaagc	cgtgcgaccc	ttacagatat	300
tgtggtggct	catggaccgg	ggttattgac	aagttggact	acatccaaga	gctcggattc	360
actgcagtcc	aaatatcgcc	agtggttgag	aacatcccag	ataataccgt	atacggagag	420
gcataccatg	gctactggcc	ccagaacatg	tacgctttga	acgagcattt	tgggaccgca	480
gatgaactcc	gaaaactgtc	caaagagctt	ccaagcgcgg	catgtatttg	atggttgacg	540
ttgtgatcaa	cgacatggcg	caactgtaga	acagttcagt	agacagtggg	tcaaacatca	600
actggtcacg	tctgattccg	ttcaatgaga	agaaatacta	ccaccctttc	tgcagaatcg	660
aagactggaa	caaccccgac	gagtccaaga	actgctggtt	cagtacggaa	gtagttgccc	720
ttccggatct	caagaccgag	gacgaaagtg	tcgtctccat	gattgaaatc	tgggtaaagg	780
gactggtggg	caactactca	attgacggtc	tgcgcgtgga	cgctaccaag	catatggacg	840
aagcctacct	gaccagtttc	agcgacgtca	tggcgtgttc	acgatggggg	aagtctacac	900
cgaggataca	gacgccgtct	gtaaatatga	ggaggtttta	tcgggtctcc	tgaattaccc	960
catgtatcgg	ccgatggtcc	aggctttcac	tgcgggaaac	atgcccggtc	ttgctgaaaa	1020
cgtccgggct	gttaacagca	aatgcaagga	ttttactcgg	ctggctacgt	ttactgaaaa	1080
ccatgatact	ccccggtttg	cgtctctgat	caatgatacg	actgtatgct	cccataatct	1140
tagaactgct	gcat					1154

<210> 3158

<211> 2433

<212> · DNA

<213> Aspergillus nidulans

<400> 3158

aggggtcgct gtagacgatc tctagccgct aggatgttga tgggtgctct cagcgtagct 60 ggcagattcc gtcgtgggcg gcggagaggg tctctgttgc ggttcttggg gatcctgggg 120 tgcattatca actgccagac gtctcctctt tgcaggccca ggcctgctgc ttgccctagt 180 gcatgttgcg ccatgcatgc gacataaaag acatggttga tcggcgacct cctgagtgca 240

tcgacttctc cgcttacgac agaagtcgca ggcgggaacc ttatgggagc gataagggcg agcgaaagat ggagagattg gtgtggttgg atccgtcgtt ccctcggcgt tgttgggcat tacgagggag gttgggaggt tgagctacct atagctggag cggttgtggt ccacacagtc 420 tacggttgtt tggccgtcgg aaagcgagca ccaactccgc tagcgcttag acataccaag 480 tatagactca atggaagctg ctgtgagcgt caattgcgag aaacgatcaa cagcagaccg 540 gaatggcccc ggggcgctcg atttgttgat tggcagaatt aagatgtaat ttaggttgag 600 ttactgaagt gacacaggga aaagctgagc gagacaaagc atcgaattgc cacqtqacac 660 aaactttgtg gtggatatag acatacccaa gagaatatac ataaacataa gacaggattt 720 taaaaaagtc actatgtgct tgatagttca atacgactac gccagcgcta ggagcactag 780 gatgttgact gagaaccttt gactacctac ttggtagtaa aatattagta cataaatcgc 840 900 tatttagget ttegeeteet cateetgett caateeagag eeeteataet tegaetgage aagggtgttg agctcatctt cctgtttatc cagcttgtag tttgttgccc agaagccaat 1020 gccgccaacg aacgccaaga tggcaacgac agcgtagttc cagacaagaa gcgggtcttc 1080 tgaaagaccg acaaaggcct gaccgatggc agaagagaaa gcgttcatga agagtgagac 1140 ggcctggacc aaactgcgca tgttcttggg cgccttggtg aaggcgtact caagggatgt 1200 aaccgacgcc agaatctcgg aaataccacc gagaatgtag gtgagagcct gcacccagac 1260 agagatgggt gcgtgcaggc cttgctccag acaactgttg gcttctttac cgcatgggcc 1320 tttcttgtag atatagtgct gggtgacggt agccacgatc ataccggaaa cggccacgaa 1380 gaatcctgct gtaatacgct tgagcggcgt gaatttgatt ccaatacgac ggaggaaagg 1440 gtatagcaag cggtcgaaga tggggatgaa aatgatgagg gcgagcgggt tgaagttgtt 1500 gatgatgtcg ttggggaccc ccgccaagtc gcatcgtggc ggtctgagag gtaagattgg 1560 taagcatttg gttgtaggca agccagtaca ggggatacca gaggaacacc cggcacgctt 1620 tgagaccgcg ggcaacttca tcaacccact cgtcatcgaa tgtcatccag gtaggacggt 1680 ttgctcccat ggtgctgggc ttgacggtgt tccagaagtg ggtatcgttt ttcttgattc 1740 tactcgatgt tagaccttca tacgaaaatg agtccaggtg gagaaatacc tcttgaatgg 1800 aataccagcc actttgaccg tggtaacgga ccaatggtgc ctgatagctt ccctgatcag 1860

acgataggce tgggtataca cagagccagt cgggggaacc aggtggtatt tgttgcggca 1920 gaggtacagc acgagaggag agaagcagaa catgatcgtg ggcagcaaga atgacagcca 1980 gaacccaacg tatcgctcgg cgtagaccat gctgatctgt ccagtaagcg agccgacgtt 2040 gatacacagg tagaaataaa gatagacacg agcaacagtg gcagctgggt caatgatgat 2100 gcgctctcct gatggtaggg tctttaggta gggccgctca tcggggtatt gttccgcaat 2160 caaggcccag atgttggact tgaaaccacc ggtacccata cccatgatga tcagaccgat 2220 cgcaaaacag ccaatagcgc cattggggt tgcgatcac gggggaatgg cggagatgat 2280 gaggataacg tgaccgacta gggcacaacc gatcgagaac atgatcgtaa ggaaacgacc 2340 ccagtactga tctgccaaga aggcaccggc gagtggcata acgtacgacc acaaagagtg 2400 gtgctttcac aagcgcctaa accccccc ccc 2433

<210> 3159 <211> 1443

<212> DNA

<213> Aspergillus nidulans

<400> 3159

ataagcagaa atttggaagt ctgccacaaa gaaataaatt agcattgata aaagtctaaa 60 ctctgaagac tttaaggaaa cctctaacaa taaattgaga aggacaaaag ctagcctcct 120 gattcagaat tcagggatga taaaggtgtt gttccctacc ggatccgtaa caaatttgga 180 aagagettga caatteagae caatagetea atagttaaaa etaaacagtt catgeeteee 240 atcatatgct tattggggcg taaagtacaa tttaaaacgg gtgaaagtca agctgatatt 300 gcagacaccg aggtggggct agccggtgtc ggtcccacac aaggcaccgc tggccaacga 360 ggctgcatgc cctaatctga tgcctcaatc cctgcaagag gcaacgctct tgtctctttg accgaaaaca gacacatgct gcatagtcct tgcgattgaa tgctcggcac aattgatgct 480 gccagcacta gctgacatcg caggatggca ggattcaaag gctatgaagc tgggcaatgc 540 actgctatga tggtgtcaag tgcattgcag aaactacagg tctaaatcag ttgtcccggc 600 660 aatcagttca aagaagatgg tattaaacat gtatcagcta gaaggaaggc tgccgacaaa gtatccgcgt ataatgagag attactgcgc atccattaat cttgccttgg ttgaggaaat 720 acctctatat acttgttcga taagaatata cttcaggttg aagttggcag cgaatctagc 780

ctacaatatt gcttatggtg gtgatcatac ggctatacgg tgggcaacgc cgttaggccc 840
aatgacctat gtatctacta ttctctctac ctctggcatt accgtcagag gcacatcacg 900
ggacagaagc cctatatcgc aaagtccaaa gctgtcaatt ctttcgcact tcgcttccta 960
gaatgaaaag aggcattcaa tctcgctttt ctactctttg tcttgagcct ttatctacaa 1020
tggtatcgaa tgctgaatat gtctaaacga ctcaccactg aggggatgat attgcatgag 1080
gtagttgaac gtataagctt cgaggttgtg catcgacgat acctagccgg gtatggagga 1140
tggcatttca tcacagatgc agaatgatag cgcagcagag gagcctagat cattgaatca 1200
gtgaggtcaa tctaaagcag atgcttacca aacccatcac tatgcccaac cctcatctgt 1260
agcgccctaa acttctggtt cattcctgac tgatctcgat ccagattgtg actgatcta 1320
gttcaggttc gatttctgct gctgatctaa aggcgtaaat cagacctaga ttcagcttag 1380
gatttcactt gctgctctac cggctctttg ccgctgtttt cttgaagagt ccggcaaaag 1440
agg

<210> 3160 <211> 1313 <212> DNA

<213> Aspergillus nidulans

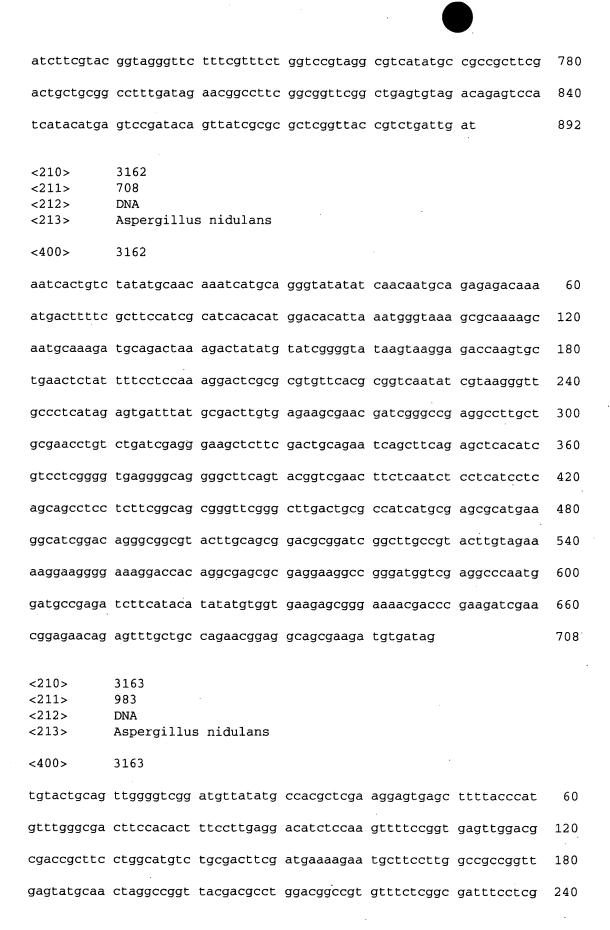
<400> 3160

cgatggctca agtaatcagt tcgcctatgc gatacgacgc cgagcgcaga gccttgcaac 60 tccgtattgc tctgccaata agaaaaacgt ttgaagaata aagaggtggg tggaattaat 120 acacggcttg aaaataagta gaactcggtc aaagcgtagt catctcccgt gatgaggtcg 180 ctgggaaatg ttgtgtaaag atgagctaaa gttccgtatt caaagtgatt cccggcccaa 240 acgccatggc atggtcttgt agcagaaccg aattcgtacc tccgagagtt caattatgag 300 atgaagggga catgaagaat tgtaactggt atcaagacaa agaactgaat cgaacggcgg 360 420 atatcattca aagaatggat atcatattag agaattgaac tatctcactg accaggaggt ggaggttggg atgggttact gggctgcgca cccccatca tgaagccagg aggaaacagt 480 ggcataccgg ggaaggaaaa accaaaacca ggaacggctg ggggtacacc cacattgttg 540 gegtgtgaeg tgtegteeat etggggtgea gaaegeteae geegtggagg aeggteatge 600 tggacggcgt gtgaaacccg ggcacgcttg cctccagtga aggttgcgat gccgctactg

atgggctttg atgacacaac cgacccattt gaaaatcgga gctcaaacgg atatgccccc 720 ctgaatggga gtcctcccgg tccaccggaa ttcccaagga ggattcagtt ctgatcccct 780 ccatcgggtt ttaaggggat ggacctaatt cctcttggaa aataacggcg ctcttgggct 840 aaagcaaacc cccaaaacgg caaaaagttt attcggcctg gttgaatcat tcctcttagg 900 aagaggcatt cggccccggt taactttta agtatgaaat tgggacctca ccttgcctgg 960 tttttcccc cggttttaag ggaccaaaag ggtgtttatt tgtcccccc caagataggg 1020 aaggaaactt tttttcctg gtaatcaaca ttattatgct tccaaagggg ggctctaaat 1080 agaaagtata ccaacgggga cccttttgtg tatccctata cggggggatt ctgtcctctg 1140 agggtgtggg gggcccagtg gccccgggcc catataaagg cactatttcc tcctcttctt 1200 ttgaggaaca tcttttcat tttataggcg aaaataataa aaagatttat ctatatgttt 1260 ttcgtctaat aaatttcctt tctaacattc acaattttgt tcttcaataa tac 1313

- <210> 3161
- <211> 892
- <212> DNA
- <213> Aspergillus nidulans
- <400> 3161

acctgggcgt gtgtcctgcc ttttgcgatt tccttcgcgg ctctacctac ggatttttgt ggtgaaaaaa aaaaaaaaa attacatcgg aatagaagcc tgaatccctg agctagcatc caagagtccg cttttactac ttgcattgta gtgatagctt tggaaaggta atgcaatctt 180 tectggtgte taccaaceta geaaaegget caaaaetgag eeggacaatg atgataatga 240 agacacaaaa tttggtcgcg caaccgctgg ccgaaccacc agcaagactc cctccgtgaa 300 atgaccettg aacteegage eteegtgata atceaggaca tatggtagge aaacatagaa 360 aagaaaaaag ttgaatggaa gaagaagggt tactggcgcc atgattttcc gcaatgcatg 420 catgtgcaaa acagcgtcat cggttcgtcg gcactgcggg tctgcgcttc agtataggtg 480 accttgcgct gtccgcattt gccgcattgc aagcttgtac taatgctgcg ctctgcctgg 540 gccaccatgg ccttatccat gttctccttt tgaatctttc gatctttctc gcgctgttcg 600 teggategga geteeteatg tgteatttte acgaategtt eaggggtgae etegttgett 660 aaaacacgaa ctcgaagcgt tgggttggac ttgttcttga gattctggaa tagactgcgg



tcaaagcgct cgataccgag gatttcttcc aagtcatcga ctgtaacaac ggggttgtac gactcaagct tagcactgtc agtggcgtcc gcaaactgaa cggccttgta gcggcagatc gaaccaagtt ctcgttcgag gttgcggacg ccggattctc tggtgtatga ggtggtggtc ttgtcgataa catcgtccga caaaacaact tgaccatctg aaagcccgtt cgctcggatt 480 tgcttgggaa gaaggtgtct cttagcaatg tgtctctttt cgacagttgt gtacccggac 540 agctggattg tctccattcg gtctaggaga ggggcaggaa tggtgtccaa ggagttgact 600 660 gtatggttct gctcagggtc cagcacttcc agcattgctg cagatgggtc tccctggaaa 720 ttagggccgc caatcttatc gatctcgtcg agcaagacca cagggttccc agcgagctcc 780 ttgatccgac catcctccag tacgccagac ccgaccatcc tgtatqcaqc cagataaqcc gcaatccgaa ccgcgctttt cacaccgccc aaggtcatgc tatgcgccta gagggccgca 900 tccgtaggcg cggaaaaggg ttcgatagtc ctgccggcgg ccggtggttc aacgagcgcc 960 ctggaggtct ccctcatgta ccc 983 <210> 3164 976 <212> DNA <213> Aspergillus nidulans <400> 3164 acccctaaaa tcaaattagg gtatgagact gtccccctta aagcctgaat tttttccacc 60 acaaagtcac agatcctctt aaagctccta gaagaacgca ttacaattca ggcaatgggg 120 cacagtgttg cttgcatcac cgcagtacag catcattctc tgttgttttt tagacccgc 180 gcggtttaag tcgaacaatg ggacgggaca gcacaacagc aaccacatcg cccaggatga 240 cccggtgcat acggcgccga gtgaaaggcc cgtgacttgg tcctcactcc ttaggatagg 300 gcagcttgct attctgacca ttgcgcgtct ttctgaacct ctcactcaga cgtccctgca 360 agettacetg tittateage teegiteett egaceegieg eteeeggaet caaceatete caagcaggeg ggtattetge agggeagttt caeggeggeg eagtttetea eggeggtegt. atggggtcgc cttgctgata gcgagtggat aggaaggaag cgcgtgctgc tcattgggtt

600

gttgggcact tgcatctctt gtttggggtt tgggttctcg cggtcgtttg cggctgcgqc

ggtgtttcgt	actctgggag	gtgcgctgaa	tagtaatgcg	ggtgttatga	ggacgatgat	660
ctcggagagt	attgaagaga	agaagtacgt	atttcggccg	ttgttgctcg	gtgggacatt	720
gctaatgggg	tcgaattagg	tatcagtcgc	gagcgttcat	tctcttgccg	atgtgcttca	780
acatcggtgt	tattatcggc	ccaatacttg	gtggtttgtt	ggcggatccg	cgcagaaact	840
atccgcagct	gtttggacca	ggttccttct	ttggtggtga	gaagggtgtg	tggtggatgg	900
aacactggcc	attcctgctt	ccaaacttgg	tcagcgctat	ctttattttc	atttcgtgga	960
tatctgtgtt	ctttgg					976
<210> <211> <212> <213>	3165 2035 DNA Aspergillus	s nidulans				
gtccagcagc	cgtcattcat	ctgctgattc	gttctgactt	cgtagataaa	acaaaaaacc	60
	-			acatctaaga		120
				ctgccagggc		180
acaagagttt	ctttttctaa	tttttttta	tttcttttta	tttttttcc	ccttctttt	240
cttgtattac	ggcgccatgg	atgtgctgaa	gaaagaggta	cccacgggag	tgctcgggag	300
tggtagtagt	actgccgcta	tatactactg	cggagtctat	actagaggtc	ttcgatccat	360
ccagaggttc	ctgattcata	cttaccgact	ggttcactgg	ctggcaaggc	acgctcggag	420
ctaccgggtt	tccagctact	ccagaagtcg	aggttacatt	tctccttggt	acgttggtag	480
tcatttcatc	ataatgtggg	gagggcccgc	gccgtggaga	cggcagagcg	atcctgattc	540
atgaagggcg	atccagtggc	cctggttgcg	acctgaggcg	acgagtcttg	gccgcaggat	600
ttcaattccg	agagcaaaat	cgtgccaagc	gggggccggc	cgaaccatgc	tcctgggagt	660
accgcaggca	caggacagag	tatgagtaat	aagcgagatc	gtattgccgc	agtgggtgca	720
ctcttcaacg	ctagtcagcc	agctagccag	tagctagctc	agcaccggca	tggcgaccgg	780
catggccatt	agctttagta	accaatcctg	ctgtcttcac	ttcatgttca	tgtccaatgc	840
ggccttaaaa	cacggggcga	atgcctcgcg	taaaaaaaaa	aaaaaaaag	agagaaagga	900

acagagaagg gaagaagac tcccttccct cagaaaacct caggaaagaa aaaagaaaaa 960

aagaaaaaaa gaaaaaaaca tatataacat atataacgta tattttcagc acacttctga 1020 caggitatacc caggatetga etegeeggee geggeeatga teaatgetet tacatggatg 1080 tctctgctaa ttatcatcag cgtaccggta tcttcctctg gttatagccc cgcacctgag 1140 atggacatgg ccatcactcc acagtcgcca tgctgctcat aaagtccatg tttcatgtgt 1200 tctcaaggcc gtctgtgcgt tgggccatct tagcatttgg cgggaggtat atcttaatgc 1260 taatgtatgc tgatatttgc gcaaccatca gcaaccataa gacggagtcc tacaaggcca 1320 cttcagggtg tcccaaagtc tccctacatg catcctggcc gctagatgct taaaccagcg 1380 tegaceagge egtateaace ggeegaagat ttaceagtge gaatteggtg getttteeag 1440 atcactagca ctcgacctcg gggaaagaaa agaaaaagaa aagaaatcta agcagaagaa 1500 aaaaactaga aataatacaa gatgatgggc cgtggtaatc cagtgatagc ggtcgcaaaa 1560 agetteegte ggttgetttt geeteatett catteagata ttatggegaa eeegacattt 1620 ttgccattcg gccgaatgct agaaacccac tccagaagag tgccactctt ctttccatgg 1680 agagecatta aaggtgegte aageetgeta teegtgetet ggeaegteat gaaeggatae 1740 atttcagcac cagcaatgtc aacaggtgac ccaacattac cgctttcctc gaaacctgcg 1800 tcaatgacga tgaattgact caagggcaat agtgacgcgt gactgatcta ctgctcgata 1860 tagcgaagct tttaggacag gttttaggga tttattggat ttgttggatt gatttgcgat 1920 cgtgactcca ttgtcagcga tttcgctcgc cgaccgccgc ttttggacgt tgcaagactc 1980 tatcagccga ccgcgagcat cgattgtctt aacatccatg caatttctag atgca

<210> 3166

<211> 1279

<212> DNA

<213> Aspergillus nidulans

<400> 3166

ctgcaggtcg actctagcct attggaaaac aatgtccgaa catataattt tcccccagt 60
aatatagcaa agatcacgaa aaggctcaaa aaagtacatt tagttcaaaa tttggagtag 120
aaaaaaaaac aatagaaaat ttcaaatttc cttcctcatt catcggagag ctctctttgg 180
gctttccgaa aaggtatcac atgctaagtt tggcctcacg gtctaaaagt tatagagtca 240
tacattttta acaaaacaaa atagagaaaa acagaaaaag agggatgcaa cacgtggact 300

ttccgggagg tcacccatcc tagtactact ctcgcacaag gacccttaac tgcggagttt agatgggatc cggtgcatta gtgctggtat gatcgcatct ttactacatg caatgtaatc 420 gtatatattc ttttttaaag actttatgat ccatttgccg tgggtccacc cgccatgtag 480 gaatacccca tctagtctta agagctttga tacatgaaaa atattggaaa acaatgcttg aaaaagtaat tttgggtccg taatatagca caaatcacga aaatgcccga aaaagtactt 600aaaggtcaaa atttggagtc gacaaaaagt caatggaaaa gttccattgt cttgcttctt 660 tegteggagg getetetttg ggettteega aaaggtatea catgeeaagt ttggeeteae 720 ggtataaaag ttatagaatc ataaagtttt aaccaaaaaa aaaaaaacat aaaagaggga 780 tgcaacacga ggacttcccg ggaggtcacc catcctagta ctactctcgc ccaagcacgc 840 ttaactgcgg agttctgatg ggatccggtg cattagtgct ggtatgatcg catccqttag 900 tatatgcaat gcaatcgtat atattetttt ttgaagaett gataaaccat tegeegtggg teccaecege tatgtaggga taccecatet agtettaaeg agetttgatg catgaaaaaa 1020 ttcgaaaaca atgcttgaac aagtaatttt gggtccgtaa tatagcccaa atcacgaaaa 1080 tgcccgaaaa agtacttaaa ggtcaaaatt tggggtcgac aaaacgtcaa tggagaagat 1140 ccattgtcct gctgctttcg tcggagggct gtctttgggc tttccgaaaa ggtatcacat 1200 gccaagtttg gcctcacggt ctaaaagtta tggagtcata aagttttaac caaaaaaaa 1260 aaggttaaac ggggatcct 1279

<210> 3167

<211> 1009

<212> DNA

<213> Aspergillus nidulans

<400> ~ 3167

ttcaggaagg gggtactccc ggtggaaccc ccccgcaaaa acggcttctt tacagaccaa 60 ggtacattac gcctttggcc aagaaatggg ccccaaggga aagttggggg cccccaaaag 120 gcgaatattt aagcgttccc cgcccatgcc cagaaccggg cactgagggc atgagcacga 180 actttgaaac cggccagcat aattcctctt cgaggcgaat gagcatcttt taggattagc 240 catgctcagc catagtctta gtataggtcg caaggagggc caatgagacg caccctcagt 300 cgtctaaagt cgcccaagg ccagagcgct tttttctgat cccgctgggc gattgcacca 360

ctgacgacaa taaatctgaa cttgcgtgca aagttcggct ggagatcctt cgtaaaggcc gttgttgccg cggagacata atcgagcgaa accetectet tcagetegte gtetgecete cgcgccttag atggagtcag gccgattgtc cagagacagg Cggatgcaga tcttaaatct tggacgaggt ccgggtttga gtaggagata aagtcggact ctgtcatttt gtaggttcta 600 agctttgggt gggtggtaga gaggtcgcgg cgggtgagag cgatgatgga ggtaatggat 660 ggatttgcta agcactgggt aagaagctct tggccgatct ggccggttac accggtgagg 720 ataactctca tcgtaaggat tgttcgaagg gttgacttgg atataacgcc ggctcacgta 780 gaaagtggaa ggtcaaaagt aagacggcgg acgaaacgcg tgctcctaaa atagtgggtt 840 aaagccgata tctccgctga ctagcataaa gctcataggt tctgaatatt ggccgcctta ggccaccttg tttggttaat ggcggatcgg gtatccaaaa acactattgt actgcttctt agaatgtctg agggctgggt aggagggttt atgttgtatg tatgagata 1009

<210> 3168 <211> 912

<212> DNA

<213> Aspergillus nidulans

<400> 3168

gatacgaacc gcaattatca caatatcacc gccctgtaat gactccattt tctttatgtc ttcgaccaca ctcttcaaaa ttccgtccct actaccaaag tccgcaatga tgaccttcct 120 aggeaatgge tegatatetg caageeactt egeegeeaac ceaaegtetg ggtaceecaa 180 attteccace geaaatttge tettteegtt tgegteattt agegeteteg eagettegee aatcggccca ggtgaagatg tgaactgtaa tagacctagc ggtccagtcc cgctcggtct 300 ctgaaaaaga ttatacgcca tcgaacgagc cgtctttgtc gacgctccca gactcacaag gacageteta gagagateeg egteagegge egtecagtee tgeaegeeet gateegteae aatteegeaa ggatgtatag gegggeggae egetggatea gaegtgaaaa tataeteget 480 catcagatat cccgcggcaa aaaccgtccc cactgctgcg tcccatgcga actcggtgac 540 atcttttccc tgcgtgtcga aaacgcggta ccggttgtag agcggcatca ggtgcgctcg 600 atgctcagat acctctttcc agtgcccgtc taattcagac ggttttagtt ctaggtcaac 660 ggcgtggcta cctgtcggcc agaaaccgaa gagcaccgtc cacaggggga tcccaggaag 720

ggtagattcg agcactgtgg ctagacccca ggccggaaca atgccccatt ctgtagtgtt gttgtagggc gccggtgcgg attgcggaac ggggtatgcg tcccaccatc gcaagaaatt tccaagaagt gcgtaggtga gattattgga ggtcaggctc agcaaacttg gtcggatgcg 900 912 gacggaggac tg <210> 3169 <211> 7935 DNA <213> Aspergillus nidulans <400> 3169 etgtgetete gacegettgg aagegaaege eetteeggae eggtetgtaa geggaeggat tttggttcgc agtcctagcg gtcacaatcg agttggccac aagggccgcc gcaaacacga acgaggccag gatcgggtaa ccaattcgaa ggtattccag cgacccccgc catgacgtta tggcgagcca tgatgggcgg tttcctcgcg cagggtccaa ggcactttat ccgaagaccg tcgattaaag tatttccatg gcacgacgac cgcagcgtta ctcccaatgt aagtgcggtt gaaactggat agctggctta gcgagcaccg agtgaggcag gaccggatcg gaacgactga ggagagaagg gataggcgac ttgggagggt ctggtttcgg cgaaatttgt gatggccgaa 420 agggatcgac ggagaagagc acggtctccg cagtctagct ttaaattaga tttttctctt 480 gggcttcagc tcaaagatat attgatctca agggtctaag gggaatgaga agaagggaag aagagaattg cggccgagaa gagaattcga agaatggaat agtacaaaaa caaggcacgc 600 660 tgagccaacg aagcaaagac tacccaagag gatagaatgc aacgagcatg agaaggaaga gggaagagat gaggaagaaa gtgggaggga cggatactgt agaggaagaa aaggaagtaa agcaatagag ccggtgccgg tatggagcct gggaatgacg gtgtggtgca tgtgcagctg tgtcgctggt ggccagaaca gttccggact tgactagtct gcagtagctg gccccagtgc teggttgtgc attegagete tetacaaagg getetttaca tagcaagttt taggageett ageteegtge cetggagate tteeeggtet geteetteaa eggtgagaat ttteeggagg 1020 gattacgggg tgttttcgtt caggctcaag ggttgtcttc ctgcggaggt cgaactatgt 1080

gccgtactcg gcatatacga gtcttattcc caagataccc aatataacca taaaaaaaac 1140

agtattcaag gcaattcaca attcaaacca ttcaaaacaa ttcactaata caatcgaata 1200 ttgtaaatcc taattagatg cagtttgtgc gcttgctccc ccaggatctt gctgttcaga 1260 aaccatcaat ggccagcact ggttggagct gagtgggcta gcgaaggatc acggcccaat 1320 gggatcatga atccaacaag gaggtettet acagactata tggeggtaaa agagetgaet 1380 ctcgctcgtc ttcagagatt ggcactttga ggcctaaagt agatcccagg tacatcgcga 1440 tgcagtcgat gttggctgtt aagctctggc accgcaagcc gagcacggag cgtttccaat 1500 ccagctgagt ttgaccgtct cgtagggatg tggcagcaga ccagtgtttg ccccagcgac 1560 agatcatcga tatcaaaccc cagcatctct tccgccacaa ccgtccacag tccgctagtg 1620 gtctatcagc tagtcgtagt agcgatcagc tcatctgtac aattagtagt ctatccagta 1680 aagtccatcc agtagtatat atgcatccag tagtagtcta tccagctatt caatatctat 1740 ccagctagcg agcgtctact ctagtctctg gcccgacgct gcggatgatc taaggcatgc 1800 taacggaggg gttgagatcg agattccagg ccgccaatct cgccttcgct cttatatcgc 1860 atacatagca caaggtgaat ctcatgatcg actggagccg ggcttgcatc caattcgctc 1920 gccgaattac tccacgtcag atggtcaaaa catgggagct cgaatccagc tcaaggcgga 1980 gtatactgcc gtacaccgcc gttagcaagg cgaaagcttg gtgaagctgc cagtctgtcg 2040 tctgctctgt ttgacgtttg ttcatccagc ctgcatctat ccagggtttt tgagccaact 2100 ggagctggga gatcccttcc gcatcgtcgt agtctcaagc gatgtggtct gagagggagt 2160 gatatatcag ctggacactg gactggtcag ataaaccgca gaacagaccg cgctcggtat 2220 cgtaaaacga cgctaaaccc gatcgggtgt aataacacgc actgggcagg tgcagtgcga 2280 caacctcgat tctcgatcga ttgccgcgac caaccagctc agaggcaagc taccttgcct 2340 ctgccctaga gcgcatcact tcaacggaca atcaattcaa tccttactcg tagtgctgag 2400 attettgeeg egttgteaag etgeaaggeg egeaetgaet aateeetgge tacaagaega 2460 ctgggccctg gctgtcttca tcccgcaaga caccgtcgga gtcttgtctc agttctttcg 2520 aacetteeta tgeaagegea tetgaeaget teeaaaeteg ttetteaeea ttgteettga 2580 cgaccatgga gcctcgagct gtttcaggct aggttctgat gctgcgcaaa ctgaagcatg 2640 accgacetee eccgattgee caccegegge ageaetteee caacteetee eccteetee 2700 cctccccgg tgcaacagag tcaggccaac aagtactccc atcgtgcggc gagtgctctc 2760

gcaagatttg cacagccctt tttctcaggg tctcggccgc cgagcccgca cggccccggg 2820 cctcgtcctg acgcgtctgc tgctgtccgt tctactaggt ctaggtcttt gtacagtccc 2880 cogttgcccc tecetecttg cetettggte gteegteeac caeteteaca egetgtettt 2940 gtaatgattc cgctggtttt aattacttta tcctgattgg attttctatt ttctcccatt 3000 tgccgccgct gaacctttga cgcattcaaa ctaatcccag ttactcggta ggccgggcgc 3060 gtcgcagaca gtcacccaca ggacaggcat ctcgatcgct gctctggata tctccccgca 3120 acggacacat gcagtcattg gaggcaaaga gattctgaaa acgattcgtg tactgccaga 3180 tcattcgtca gaagaattta acctacgcaa tgctattatc ggctactcat caactcacca 3240 tgctggcggc gggctttccg cgcggcacaa ggaccagctg acggttaagg atgtgaaatg 3300 gtcacatgga ctctacgatc agattatcgc caccgcagtg gccaatggtc gcatcgtcgt 3360 ttatgatctg catcgaaccg gattggagta ctgccggttt cagggccata gccgccaggt 3420 ccatcgtcta gctttcaacc cgcaccaacc agcatggctt ctttccggga gtcaggacgc 3480 ccatattcgg atgtgggatt tgcggaccgt gcctacggat cgtggcgttt cagtatgtgg 3540 aagcagagac caatataaca gcaatagcga cgctgtccgt gatgtcaggt ggtctcccgg 3600 cgacggagtc ttgtttgcgg ttgctaccga tagcggcgca atccaactat gggacattcg 3660 caaatcgagc agtcccattt tgcggattac cgcccacgat aggccatgct attccgtaga 3720 ttggcacccg gacggaaagc atatagtcag cggcggtacg gatagacagg tcaaagtctg 3780 ggagttttca atcactgccg agcgcaggca gaagccgtta tttcagttta ggacgcctca 3840 ggcggttctc aacgtccgat ggcgtccgcc ttcgtggtcc agagaatcgg atagctccgg 3900 ggactggcag tcatcacaag tagtgacttc atacgacaaa gaagacccgc gggttcatct 3960 ctgggatttt cgccggcctc atattccttt cagagagttt gacagatacg actcaactgc 4020 tacagactta ctttggcatt ctaaagatct tctttggact gtaggtgatg gcggcgtttt 4080 cactcagact gatgtacggt acgctcctca ggtggttaat cagcgcccaa cctgctcggt 4140 ggcctggagt cccagcggca aggttctcgc ttttgctcaa aagcgcccta ggaggagcat 4200 tegaggtete agtacgaaeg agtttattgg acatteegat gaagaggaea eeagtggega 4260 ggcgctaagt cagagtcctg ctgaggaggc ggttggagat gagcccttgt ttgcttctat 4320 ecgacetege catagtaagt ceagtagtat tegtacgtee aaategeteg geagtacece 4380

3.5

accggcagcg acagateteg tececatact tecgetggaa aggeteetet taaaggacae 4440 atcttcctct ttgtgccaaa agggaatgat ggtaagtgtc cctggagcta cacttgatcg 4500 agaaacgttt caatateteg etageeagta tteteetete etecaagggt ggeteagtgg 4560 catgcaggca gggcctttgc ttcctctctt agattcactc atgtacaatg ctcaatgcgc 4620 cgaagacatt gcattgccta aactggctca gacctggcgt gtgatacatt acgccatcat 4680 ccaggagctg caagcaaggg acagagagca gcggcaagcg ccggaaaaga gctctcgtag 4740 catcaggaag aaagctteet tggaggaeee cataattgag aaggteegge etetggaaga 4800 tgcgagacat ggaaagatga agactcgctt cttcaagggg gtaatagaga gcgaagcatc 4860 aaaacattet cactetgace ttgagagege tteaaacatg acaaegeete ttgeteagee 4920 tttgccagac tcgccgcccg actcgtatga tagttctgag tctcaattca gacatttgga 4980 tgatgctgaa gatattcaac ctcttccgcc ctcggttttg agctcaaacc aggataccat 5040 ggcctcaaac gactggtcat ccatgtcgga cattgggtct cgccccatcc atcaacttca 5100 ccatcgtgaa tccaacgaca gtgaaaatgt gcgcatacca tcggacagtc cgccagccgg 5160 ccgcagtggc tcactgcacc agggaactga ggaagaacag aggtctgccc attagcaatt 5220 gctggcagga cagactggca taatcgtcgg ccgcaactca aaaagcaaat atcggatgta 5280 gacgaatttg agcaaaaggt agaggacaaa agggctgcca tccgtgacta caagtacttc 5340 cctaaaaagc cactctctct cgaagcacat gcagggtctg gtaaaccggg ttactataga 5400 cacgaatcca cagaaagtct cccaatgttt tcggcatcaa caacaagctc acatccgtcc 5460 aagtcgccgg ccacatcctt cacctctgca actaggcttc atgacgcggc cgaagtagtc 5520 cgaaatggtc acgacgttgg gtccagaaat gagaaattgt tgaggacccg cagcgattca 5580 ataatcacca ccaattccat tgcagaggag gaactcgagg ttgacgagtc atttgacgaa 5640 ggcctccctg atcagaacca tatccatctt gacagaccat ctacgccacc cccccttatg 5700 aaagaatcca caccettaga gtegetgage aaggaaaatg agggetetge agcaacaaaa 5760 gactgtgctt cagctgctgt gcccgacctt ccagacggtc tttctcgcat ctctatacca 5820 atactetetg accaaacggg caataaceee tggagtgeag aaataetttt gaaagaggeg 5880 atcagacact atcatagtgg tacacacgtc gacattcaat ctgctgcgca tctgcttcaa 5940 aagctgcata ttctgattga ggacatcgat aatgttctac cggctgagga gagcgagatc 6000

atattcaaag cgtacaatga ggccctgata cgccagtcca tgtatatcaa agcagccgag 6060 cttcggttgc tctgcgtgcc gtcttatcct accgtctatg agtatgctca aggggacacc 6120 tacatgaacg tgttttgctt cacgtgcaaa aagccttacg agaaccccaa gaacgacaac 6180 accegetgee accegetgeag cactecaeaa gaacettgea ceatetgtat gageettgaa 6240 ccgccaccgg aatgggttgc agagcagagt gccttgtccc ccgatgcaga acacgattta 6300 caccegagtt ttacctecca acttetetea ceateceatt ettegeteaa taeggageee 6360 attececatt etgagetgea gegtattgat gaatteggee cagaggteta eegaegegeg 6420 cgtcccaagg ggactacact ttggtcttgg tgtcaaggct gcggtcacgg tggtcatctc 6480 gcatgcataa gcacatggct cagggacatt gaagtgagtg aaggcggatg cgcaactccc 6540 ggttgcatgc atgactgcgc cccaggtccg cgtcgcgaac acaaccgccg tgtccttctc 6600 gaggaatcga agaagcgtga caatgccagt cgaaaggccg gcgtcggctt cgtcaaacgc 6660 gacacctgta ccaaagggtg aaagcaaggc cgtgaaaagg tgcgaggcat gttgggcacc 6720 ggcgccagtg ccggtgctgt cgcttcgacg gggagcgtga cgccgtctac caccgcggcg 6780 accagegttg eteccagtge aacgtegteg aateteatgt egtegeegaa gaaagtgege 6840 cttgtcactc ctagtgagca ggaaaggccg atgagaactg gctctgcccg gactagtttt 6900 ggttgagatg tcatccaggt acttgggctt cccactgtgc ttcgatggtt ttcagtttct 6960 ctgcttgcca aaggtggcac tcacaaacta tactgtgtat ataggggaaa aagcggtaca 7020 gtcagcgata agcgtactgg actaactcta gatcttggtt tcagcattaa taattaagat 7080 atgtaccata gcccattcag attcatgata ggtgtagtcc aagaacaaag tatttccacg 7140 tagtetteca egateceage tattteatga caagacegta tacetgteag caatetaaet 7200 ccagcatatc tcagaaggaa atcggctatg agcgaactag ctaaaacctt cgcttcttct 7260 ttgcaggggc cttactcttc gcctcgagct gtctcttcaa ctcctcccgt ttcctgtccg 7320 ctttttcttc ctccgtctcc tcgcgttccg gctttgcagg tgttttcagg ttcggttcct 7380 tagetteaeg gagegatgga gaeetagaag egggtettte tttettetee geetegteet 7440 eggtattget etgeetttgg geegtetetg eeggtggeag taegetetee gttegegagg 7500 agettggege tteagagetg tgatettgta eggetttttg ettggagttg tgeeegeeaa 7560 taacgccgat cctacctagt ggctttctct tttttggtgg cgggtgcggt tctggggatt 7620

gagateggaa tggtttgeta ettiggetetg getetggete tggttetggt gttgettgtt 7680
teeteettee teegataaeg eetageetge gggaetgetg gggeaetttt etgggggetg 7740
atgtgggggt gtgtttgte tttgttaaag tgtaetgatg etettegtet gegtttgegt 7800
ettegtetgt tgttteetea ttggeeaage tttttgaagg gttgtgeatg eeatgagatg 7860
gagaaggtaa tggtgaeggt gtaggegtte gtgaeggtga tgaeaggete ggettegtet 7920
geteatgeae eegat 7935

<210> 3170 <211> 934 <212> DNA

<213> Aspergillus nidulans

<400> 3170

60 aatcgacggc ctgcgtgatt tccgaggctg gggttgagga ggtgcacaag tgcacgtgaa aacggagagg atgatcccat cgtgacgcgg cgagggggcg gaagagggcg tgttcagcca 120 atctcctgta cagagacagc tgtggatggt ggatagttca atcttcccat atagtctcaa 180 gatctagatc ctgccgacgc tctgctccgc atacactcca ccgtttccga cccgagcgcg tgtttgcgaa agaagacgga ccggacatat ccgatatgcc acgccggcgg ctgacgctgt 300 tggcgtccgc atcgtctgcc ctgtcggcgg cggctttgag agcggctatg cggtctgctt 360 caatggctgc ggcttcagca tcggggatgt ccggaatcgt ctcgagcgag gatatactcg 420 480 ggctgcggga tcggagactc gtcggggtcg agggcatcga agaggcagag gagaccgagt agctcgggaa ggactcgttg aagcgggagc tgagaatgac aggagacgaa ctcgcggagg 540 acageggget geeegegace tggategaeg gggtetgagg gaeatgtage gtegaegagg 600 gccgacggcg accgatccgc ggcgtataat gtgacaagac gggtgaagac aagtagaagt ctgtattcgc agcggacgac gaccccgaag tatccagttc cgcgtgttct gatatcgtct 720 cggagatgtt cttgcggtgt agcatcctcg gctcgaacga atccgcgtac gacagctgta 780 gaggtagata ccgcttaggt gtattctccg ccatgttcgc gggcgacccg cgaccgttca 840 caaagatata cctccctctc gagtccagac caggcgacga gtgcgcgcgg atcatggcag 900 ggctaccggg gtcgtctgcg agtgaccgcg accg 934

<210> 3171

<211> 1315 <212> DNA

<213> Aspergillus nidulans

<400> 3171

accggtaaac cggctcatta ggagtatcag ctggtagttc cacgacaaag ctctgtcgat 60 tetegegeee atactgeaag tttgtteeet gggatgatae ggaceeeege tgtggatate ccgtcggcga cgaaggcgcc tgatacaacg atgaccttgg cgacatctca ccaggacccq gatacagggg agtcgaagat gtcggttgca tcatggccgt cgagctgctc cggtcagccq 240 gattecaegt ceteagette ceatetteeg tegtgecage etgeaggace eeggeateaa 300 gaacgtccgc tttcttcacg aatcgatcaa cgagcgcttt cagagcggct ctctgctgcc 360 ccttcaccag aggcatgagc gtgatattgc attccatctc ggtgtccaca cacaggtaaa 420 ggcccttccc ggcctcgccc ggtgctggcg ggctctcttc tgcacctgac ttgagcaccg 480 actegiceat geigtetaeg aigegalace gaigeegaga tegaleeca aiggegeala 540 tacatgcgtc actaatcccc agggctcatc gtggaaacat cccttgaaac tgatctttcc 600 cgagcccagc ttgcccatcc ccgggacgta ctgcacccgt tcggtgatct cgtaccaggt 660 gagatagtac teeteagetg gageattteg gggegetttg aegggttgat gegagaggae 720 gagagggctg agggtgatga tctcactgtg gctgtgcagg atgtcgatcg ctagttgacg 780 ggggacagac ggaggtatag gggttatgct agtgtatgct tcttttttgc gaacgttttg 840 actggcttag gattaagaga ggatatacac taacaggagg aatgcaccct tgcgtgatgc 900 agaagtgaag tggagtgtgc agaatgcaga gtgttaggga aatggcccct cgtgttcagc tcgttaggcg tactgagaat cctgaggttc cacggaataa caacttgcta actggattag 1020 gcttagagct ggcttattat tggtgatatg aacttatcca aqtctqcaat tatccqqaaa 1080 aggttggtct ggttttatga tgtcgcgggt agtaccattg acatatatgg acatcaccat 1140 ttataaatgc atctatgtat tatctaccaa aggctttcgg tgaatattcg atatatggtc 1200 tegegtteaa aggeeeagge tittacaagg teacactata catgggaatg gaactgagte 1260 cgggtttggt gaatgttttc cagggaataa ttacttatta tatctacaqa aagtg 1315

<210> 3172 <211> 1066

<212> DNA

<213> Aspergillus nidulans <400> 3172 ggacttggaa cgtacacccc cgttcaccct tcctgatgtc tgaatggtcg ggcttgccct 60 aattagetee ateaaceegg acaceeagae cetegaeett gteaceeeca teeetteeae 120 ccgcctaatc caaagcctcg aacgagggca cgccctcgtc ctcgtccgcg gggtactcga 180 taacccgaac tgggcggttg ccgaggagta ctacgcggct agggcggagg aacgaagggt tagaaggggg atccggggga ggaaagaggc cggggtgggt gagcaaggcg atgagagtgt 300 ggagcaaagg ttgctggggt tgttgaagga gagaattcgg cgggcgaagg atgttccgtt 360 catgaccgtt gttgaggatc atggaaggag gaaacaggag gaggcggcgc agagggcgct 420 gtggaagttg aggaagaagg ccgggattga gagtgaggat gaggatgggt attgaccgtc 480 tcctgcacct ctgcgggtaa atgtatagac agcggtctag ctatttggag atagtgtcgc 540 aaaactgatt ccgcacaaac tacgtccacg aaacgtccac gaaacgtcca cgaaacgtct 600 acctaaacta tggattctag ctacaccgct cagcgcctac ctcgccgggt tcatcgtata 660 cctgattgat tctttctggt ggactctacc ctcaccagcg aaagtcgcac cccaaaaagc 720 aatacgataa tcaaacaata aacaaaggtt ccctgcccag tcttgaggcc caacgcccaa 780 tatcagtatg atcggcgcag caaacattca tcatctccgc agcttccagc cacaattctc ctggctcatt ttgcccagct gtgatcattg ctagcggtgg tatcgtccag tcacgaactg aatcttgacg gccgcttgcc gcatgggcat gaacccttga aagcacataa ggcatctccc 960 tgagtccagg gctatcgtcc gtaagactga gctgacgctg atgctggcga taatgctgcg 1020 tagtctgctt ttcgcatgga cctgccactc tgcgcgtacg gcgggc 1066 <210> 3173 <211> 1424 <212> DNA <213> Aspergillus nidulans <400> 3173 tctgaattag gcataagcag tcgaatccct ctttcgaatt gtcgaagatt ctcatatgcc 60 ctaacgtttt caggttttcg cgcaacgtca gcctcgaaat cacttctgtc aaatagcgtt 120 -

180

gacttgcact ctttgcagag cctgatgtcg atgttcaggg aaccaacgtt gactgatttt

tctaaatagg ctttcgacac taaatgaagt tagcataata ttgcttgaat gctggcagca cgtacatggt gttacgctta gcggaacttc aacagaacat cccgtcaaga catcaccgca aacgactcgc ccgcaagtgc ggcagtgatg ccttcgaaag gtataactag agaaatcctg 360 ttggcagaat ggacaccttg tcacgctagt atcatcctgc cagctaacaa ccgtctqctc 420 gagageettg egeteateat getggaatgg aataggeeag agettatteg aetgaagetg 480 ctctggtgaa aggctagcta atagctgcgt gagcctcgtc agacgcttct ctaaccgaga 540 tacttccagc aaagacttgt ccacaatagg cttccttatg gctttgaact cgtccatqcq 600 atctctgacc agacctactg cgtattagaa tccgccatcc aaccaagctg gaggtaccta 660 ccgttatgat cattataccc tcccgcgatt tatagcaagt ctcgcagact ctataccaca 720 aaccegcact ggetcatgtt gegeagatet agaaagette atttgataca tegtatgete 780 ctcgcaaaat agctttccgc atttccggca gttcacacag ccatttgtag cgttaagccg 840 ctgcccacac gacggctcga gacaagtatc gtagaatcca cgaggttgcc aatgctcctt 900 cgttatgatc tcctccgggt cgggtggcct gggttgcgct tcatgcagga agctctgaga 960 ttggtgattc tgcgaaagac cggatggccg acttgcgcct gtcagagctt ggtggttctc 1020 attegatteg aataegteea geeeettgag ettetggtte aacaeageea aeggetgaaa 1080 gegettegee ttetecatet gegtettgaa ecaateetta aetteatett gteggtegte 1140 ctctaggtta tgatgaacgt cgtcgaggtg tctgcagaag ggaagtttgt tagtcgaagc 1200 acgaaaacca ggttgcaggg gtatgcaggc tccgtcaata cctgtttagc tgcagcaatg 1260 tgacctgaaa ttcattagca actcagtcat ctctcacaca caagaagccg tattcggcga 1320 gcacaaactt accatctctt cgctgcaaat cgggcaaaat agctgagccc cggtcgcagc 1380 cggagccgca ggtaacgggg cgctcgcatt atccagtaaa tggg 1424

actggctgct tcctcttggc agcgccctca cgtcatcgtt ctcgacgaac cctccaatta 60 cctcgaccgt gactcccttg gcgccctttc caaggctctg aaggccttcg agggtggtgt 120

<sup>&</sup>lt;210> 3174

<sup>&</sup>lt;211> 3745

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

<sup>&</sup>lt;400> 3174

cattatcatc actcactctg ccgagttcac tcagaacctt accgaggaag tctgggctgt cttggacgga aagatgactc cttccggtca caactgggtt actggtcagg gaagcggtcc tcgtttggag gagaaggagg gtcctgatga gattgtcgat gctatgggta acaagatcaa 300 360 ggttgagaag aaggtcaagt tgagctctgg tgacaagcga aaacagagga aggagcgtct ggcgaggaag aagcgtggcg aggatgttga tgatgatgag gacttttgaa caataaaacg 420 ccagggataa aagtgtgtca tggcttaatc ttgcttgttt agctgttata gaggttacga 480 tcctatgaat ttcatatctc ttcagttcat ttcagttcat ttcaaataat cttttcacat atatcacact agtattccca aaaaggattt aggtttgaga taataaaaca aaatatatcg 600 atgaccaagc tacgtgggac atgaagctta tggacatata catatttggc gtagtcgagg 660 tcctgggtcc tcagatccaa gttaacttag tacagcaatt ccagggctct acacactagt 720 accggtcctg tacattccaa gcgttttcct ctgtgagcct attactccgc tttgtaggtc 780 agaaatattc cacatgagcg tgtcggtgcg tagactttgc atgtaatata tccagaatca 840 ataagaatat taggagaaag cctagcctct aacaagtact aaataaatct tgtgcgttga cgatgactgg ctatcccttg ctgaattatg gctacctact cgagcgtcaa agagtagggc 960 gaactcaagt cggggggttc catcatggtt agcatgcaca gcttcgcttt caacaagcat 1020 tttcattttt tgatgttctt ctcgagcagc aatgtgaagc gggtggtctg catcagggtt 1080 cgccacctcg cccaggagat ccctgacgtt ctcattatgg ccatagtgag aatcttccgc 1140 caacgatagc cttttgtcag tgcaatcgtc attcttgagc agaaactgaa ccattcgaac 1200 ggccgaagct agcaggtcgt tttctcaaga ttagccccag gtttcagtaa aaggtcaacg 1260 ttctcgacaa cactggattt ggccgctgct ggcaattgat aaccttgtga acatcgactc 1320 catteegeag taagaceega tgatateagg ggagcaaace agceaaacga gecacgaggg 1380 cgctattgtt gttctctgac cgacaaagag cattaaagtc accttaaaca gtgtatatcg 1440 ttgccacggc ctgaagatcg ttcaagaaca agcttgttgg agtgtgtcct catacctgta 1500 gccactgtaa tagccagctg cagagtgctt cagaataaca ttgacaataa tatcatggcc 1560 tccgtgggca ctgtccgcaa aataaagtcg cgaaagcctt tgaccattcc tatcttcagc 1620 teettttega gaaataatag aatgaegaea aattgaeett eeaeggetge agetgaaeet 1680 gaccttcctc aacctccgct ttaggatcag ctctatgatc tgtgaggcag acgatattca 1740

agtgttctcc gtaagatgca gatatcaggc ggaattgagg cccgtaactc cgtccctaag 1800 caaggtctgt atcatagcaa ggaggtcatc aagcaagcag cccagaccac ggtctctgta 1860 tggctgggct aatgggacag cgctggcctc tgatgatata ctcgatgagc ctttccctct 1920 gtaccagaat gttgatcatt ccatgccccg ggctccatca gcagctgcac attatttaca 1980 aggettttga gggeggeaac gageaaagge gtgetetaca getggeteat ggeattegeg 2040 tccacctctt gtttaggaac accctagacg tttcgtactc gcaaaactat gagcttcaca 2100 aggtagagee attgtttett gaegattege aggatttatg gtaggattea gaeattgtea 2160 gtccaatcct ggtgaggcga atgttcggaa acaattggtc ctgatcgacc cagaccatta 2220 cgcgtcatcc atatccaaaa tcagatattt gatacaccct tgactcaagc tcaagtggtt 2280 attgcttcgg tcaatctgga gcagacctgg gacctgccag gacctttctc accaaaaacc 2340 ccccactatc tggcgaggaa agtgtatgga ctattccgat gacaaccagt gatcatatat 2400 attetggtte ttgtetatae caactgeate teccagagaa gegacagate tagttattag 2460 tcattaaata gagctaacta agtggtaggc aaatcttatt accaggttcc aaggatcaaa 2520 ggacggtgat ctggaagagg atccgtcgac agtgtcagga gttttgtacc catttggata 2580 acaacgatac gcaacgcact gcgaaaacga gcccggctgc cgttccaaag cgaagagggc 2640 gatctcgtgc tgagccgttc ttcctagaac aagacatcaa ggggcatgac gtatcttggc 2700 gtccgcccta tgctagggct aaagtatcca atgatcacag cgttacggag ttttctgagt 2760 getettegaa atgaegeaag gtgttttaag tgteeaaege caectageet ggggeaggee 2820 taaggcccgc tgcgccccat aaaccaacaa gtgtctctcg tgcctcttgc cctacaagaa 2880 caaagccatg acctectaat tgtcatggce gaaacgtteg aggagcagaa atccaeetge 2940 acattcatat ctacaagatg atgagccgat gaggtggata attctctctc ttgagcctgc 3000 tgcggccgtt aatcgttgat tgggttggag tgtcctcagg tatgcctgat tcgctacgag 3060 atgggatete aggaggaatg aggetgttgg gaetagtget etagaettaa atgeatgaag 3120 gctctactca tgctaatggc tacagtgttg ataggcctta cttcagtagc atactgagct 3180 gtcgtagggt actcaactac cgctataact gaaggactta agggacggaa cggacaggat 3240 aaggtccctt tcccaacttc cccactatat tcgatcattt gttacagtag tactatgtag 3360

getgactaga gtggcagtgg catgttacte atgcgaacta tggtatatgg gecatgtgge 3420 tgactcggcc gtagactgtt cccttttaac tcaattaagt cttaagtctt agacagetgc 3480 aatcgtccgt gacgtagaca cgattagccc caagcgttac cactaactct tggtgtaaga 3540 ggtcgaagat gtcggtagcc atgataaagt ctgagagaac agcagttgaa tggatcataa 3600 atttaccctg gtctagatat gtccgaccgg tagccgttga aagcatggta tgtatacaaa 3660 tcaaatcaaa tcaaatcaag ctcattaacg atgtcatcac aactcccagt gattcctgac 3720 cccgcaaagt taagcattct taacc 3745

<210> 3175 <211> 1038 <212> DNA

<213> Aspergillus nidulans

<400> 3175

gcgaaagctt cttgccagct ctgcgctcgc cgctccccat ggccatgctc acactacctt 60 gcacaagctc gagcccgtca agcgcgcgtc caacacgacg acctcctcca agcgcggcgc cgcttacaac gatgcctccc tcgtcgaggc cctcgcttcc tccggcacca tctcctgggc 180 ctacgattgg aacatgtaca ccatgggcga tctccccagc aatgtcgagt tcgtgccgat 240 gctctggggt acaaagatgt tcaccggctg gttcgccgcg atccagacgc tcttgaactc 300 tggaaacaac tacatccttg gtttcaacga gccggacatg gcgtctcagg ccgcgatgtc 360 ctcgtccgat gctgccaaat actataagaa ctatatcagc accttcgccg gcaagtcaaa 420 getegteteg ceegeggtea eeaaeggega gggagaegae gteggtetea aetggatgeg 480 caactteetg aacteetgta cagactgega cgtegatget ettgetgtee aetggtaegg 540 tgactcggca gacgacttca aggccttcgt tgaaaaggcc accgcgctgg ctgacgagtt 600 cggtctcagc gaaacctggg ttacggagtt tgcgctcaac tcggatttgt ccggctccgc 660 ggatgccagc acttcggcgg acttcttgag cgaggtgctg ccttggttgg atgaacatga 720 caaggtcagc cgctatgcgt acttcatgtg ctcggatggc catctgctca gtggaaacag 780 cttgagcgtg agtggaaagg cgtatgtttc ttgattgggg catctgatct aaccagatcg tettgtgege egtttetttg gatatacett teteteegat etataceett tittgtttga 900 tttgatccta tttttgtatc taccttgctg cttttgttct tcttcctggt atttccatcc

atcctaacac	ccgggccgtc	gatactgcct	acctctttaa	aaacgcaaag	gcagaagata	1020
tgtttagaaa	agttgaat	,				1038
<210> <211> <212> <213>	3176 619 DNA Aspergillus	s nidulans				
<400>	3176					
actaacagcc	ccgggccatc	gctatgagag	aggécateca	ttgttacaat	gtctctttca	60
gaactaatcg	atatagatat	gccgtctcgt	actttcttcc	tattgtcctc	atgcagggcc	120
ttgaatttaa	tgttgcagag	gcccagactc	ttactgctcc	tgtatgcgtc	cttccctcca	180
tgatcacggt	tacgtactga	ctctctgaaa	tagtgctttc	tatttggcac	actcctcggt	240
ctaacagagt	cttggctatc	cgataaatat	aagacgcgag	ggatagtagt	agtcatcaac	300
gccgctctcc	agataatggg	ggttgcgctc	ttggggtatg	cgaaaaacaa	cggggtgcga	360
tattttgggg	cttttatact	ggccggatcc	tgcaacgcca	atatcccggc	atcactaact	420
taccagtcga	ataatatcac	aggtcagtgg	cgaagagcgt	ttgggtcggc	cttgattgtc	480
gctgccggcg	gcgttggcgg	cgttattggg	ggcttagtgt	ttcgtgaccg	agacgcgcct	540
gattatcggt	acggttttac	cttaaattct	ctttcttggg	aaaggttgtt	gatgtgccta	600
cagacccggc	ttatggacg					619
<210> <211> <212> <213>	3177 2686 DNA Aspergillus	,				
<223> <400>	3177	all n locati	lons			
tcaactctta	accagactat	agtccatgag	cggcatctta	aatgctgtgc	ttgacggcag	60
ctgggcctgg	caaggcctat	ctttaatgcc	cccagacggt	gcagatcgcc	ggaacggccg	120
gaggtcgccg	agctgctatg	agtctggtcg	agttggtatt	gagtccagag	ggacctagcc	180
gttgtctagc	cctcaagact	gagagaggga	ggggggatca	tcccaactac	tggctgggaa	240
cagacgtcag	ctgctctcgt	agtacaggaa	atggcagaaa	tgacgaaact	gatcagacca	300
ccactaaacc	actgcgccat	agataggttg	aggatgatat	ttacacatac	ccatcacacc	360

aaaggtggct aaactcactg ctctaaagca tttagggctt actgaacagc tccatctact atagetgagt aagtggeaeg etgtttgteg eeaceagtte ttgtttgetg eatgtgteae tggcatattt acaggcaagc agtctatgct ggaatatgaa gattggtata ttgctaaatc 540 attgaactaa ttcattgaac ttcctataaa aaagacctgc tgacagtttg ctgggttgag 600 tgtctacaca gtgatgcaat agtttattta cacacatttt ctttttttct acatttttat 660 ataggttatt tccactggga agccggcaag agcaggtctc ggtctggagc tqatttaqat acagcattac cgtcccattc tcgtacatat tggctgttac gagaagggac tgggttgtcg 780 agagtggtcg actccatgct gatgagagaa ctgctagaaa gagctgcctg ggccgcttct 840 taaggaacgg teecegteet aatgaatata cageacgtaa egettettae eggettetta taccetecce ceagggtege egeegttgee geegeeagea geetgtggea acageggeet 960 ctggcatagg gggcagttgt cgttctcgta caggtaccag aactcaagac acccggcgtg 1020 gaacacatgg cggcacggga tcgagtgcac caggtcgtca ggacggacgg tatctagaca 1080 aatgcagctg cagccagtac gtcagtagca aggcagagca agaggaagac tcttttttt 1140 aacccaccag gaaggcgaga caggttgact cgaggcaatc agggcgacta cctcggtcgg 1200 tgccgctagc gagttagtgc gcagcgcagt ctacggggcg tcccggtctc gtcaagagag 1260 cetgageege aaaggetegt tttcatggae geaegeetee ategetgetg ggetgeateg 1320 gcaggctagt cccagcgagc ggcgggtgat gcggtatgaa tgtaggaccc tgagcgcggt 1380 tttaatcagt ttggttcacg cttgacaaga cgagggctga gggactagag gctcaccagg 1440 ccatcatcac tgtaatgtag acacaaaaga cgcagatata gaaaaggagc tgtgggacaa 1500 cagtegetat tgeetttgge ttggtgegeg tgetgtggte ggaggtgtee attgeeattt 1560 ccggaaccaa caggatacgg aggcaaggcc ggcaaaggca agtatacaat atttggaaaa 1620 gagataggat tetetgttta tgggetgagg aaggacgaeg catgaagtee gettaaetgt 1680 ctcgaggacg atcagcccac ttgtatagtt ccgtggatgg cgcgcggtca accatggcgt 1740 tgtggagagc ttgttggcct attagacgca tagtacgggt ccagaagatg ctgctagaat 1800 cttaactatt tagtactgta ttatgggagt cgaacagctc agagttggtg gggaaataat 1860 agtgcagaaa tagatacaat gacaacccta aaccctcatc caggccagtc tgtatattaa 1920 ageteaagat cattiticea teacceacte eteteactee tieteettet tegteteeta 1980

tectatetet getettette etgggeatae eccatetege geagtitetg ageggeegtg 2040
tacegegteg aateacttag aegteggttg tgegteaege tgtgaaacce aagteagaeg 2100
cacgecagta agagtaaaga atactgateg categagtee agagtacaet caegetttea 2160
gteeegeege gaetetggtt gggetettgg getteteece gtacaactee teeegggeet 2220
cttggtegte catetecaga ageatgegee gggeatgete ttteeettet teegagaega 2280
gegggttatg gagegeecta ataatgegat ettetggtta geetgattea aggaegtgta 2340
gatgeaeegg ggttgeaeeg gggtegtegt geataegeet tgtateegge egeegatta 2400
atgegeteet ggggeggeat eggetggtet geegatgeat gtegtgtete gtagegteta 2460
tgetggeggt ggtaaggeae gtgetgteeg gettetteet geatetetet tegtgetteg 2520
tettegttea ggteetggag tgaetgeege gegtgttett tggeegtete ggagaegtge 2580
gggttgtgea gtgetetgeg gaaggteage ttgteagaat ceateegttt tegteettag 2640
gaeettgege eggaggggee tattantagt egtattateg neeega

<210> 3178 <211> 949 <212> DNA

<213> Aspergillus nidulans

<400> 3178

actgtatcaa gaggccaaaa tagtgcatgt ggattgctat gaatcgtcta tggtgtgccc 60 taccaatgaa aacatggcca tagcatgatt atggtaagaa tatattcgta taagcataat 120 tatctgtttc aaacacacag gtaaggggtg attatctaag gaatatattt ctgagccaac 180 cgctcctcta catgcgcctc tcatgctgtt atcatggtag gaagctgccg tgtaattgat tgaagacgac gccgccgttc aaatcaaaaa gtccatcaca aaaggaaagt cagggaaatc 300 atgagcaagc agattggtgt atgtggatgt acaaaataaa caatgtacgt aggcttggga 360 aaataggaag atgaatatat gacagataga agtgagtttc caagccctat ggacccatat 420 acaggaaaaa tgattaattt ggtgaccagc acccagaggg tatcaacata tgaacggcac 480 atgcacctac acatgccccc aagccccaat accaggcggt gcaggtgcaa tggcactccc 540 actatccaca ctccccccaa tgtcccaata attgcggctc gaaccggtca aggtccgacg 600 gctggagata gcagacatct ttgcgctctg gctggcgcag ctagagctag gacggcgaag

gtgttggcga agcacaggcg acgaaacgcc agtcaaacct gaatactgtg attgccgacg 720
cgtctgcgtc tgtgacctcg aatgggctcg cgcaacaagc gggtgatgct gaccgatgat 780
ggcagcgcgg cgggacgcgt cttgcgggag tcgacgggtg ctgtggacgt cgtggattgc 840
ttgaccggcg accaaggcgg ttacggagct agcggaagac catcatgatg gcgagcaacg 900
ttcccagtat tcttctcgt gctggcagcg agcgggctca gggaatggt 949

<210> 3179 <211> 3413 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations

<400> 3179

caacacattg catcettata gggtteetga egacttteac gatgetggee egtgacegae tttcgtccaa gaatttgttc tggattttag tctatgtgtt ctttgggtat gcggtgagaa 120 ctctctgtct ttgaccgctt tgctaattag ccacgcgagg cagatcgaac tacctgggtt ttgtgcgtca actccgtctt cgaacagagc ggccgagatg catttactga cgtggctgaa ttgattggct cacaggacat ttgctatgat gtgagtacta aaccaacctg cgcttagaat 300 ctgtcgactt ttgggacaag tcttttacca aaatggttgg ctctcgtgtc aagataactg 360 acgcgctaaa tccttagatc tccccagtct tcggatgcgg gttgatgtaa gtcttcccaa 420 ctgtatttgc tgcgccacag gacgcctcca acgaacccct cgcatgcatt tctgtcatat 480 ttttggtttc ccacgcggtc actcgaatct tgctattctt ttcaggcgct aaagccaaca 540 tggcggtgca ctttgagtgt tccgactgtc ccaccagaat tgtcgcggac gcgggccgca 600 aggccccaca ccccttgatc gccggctgac acggtcatgt tctaggctcg tttttgtctc ggtaacaagt ttgttattga tctcctcact agtcagtctc atgagcatga gcatggaggg 720 tgtaagtete eettgetgaa eegggettet tegeggeget gategaette ettgtaggtt 780 atgtcgcatg cccgagaaga atatctcttc cagttagtga taaaaattgc gttggatttt 840 tatcacageg actaattcaa taggetggee atetatgtte tagaaagtag caetteeaag 900 agactaacat acttcatgcc tccgttggtg agttcatatc atcgtgactg aggagtgaac 960 cgctaataga tggcacctaa ttctacagaa cctcattcca ctcctttgca ttcgcccaat 1020

gagacttttc ctacctgcag cggaaatccg gcgagtgcgc atcattcttc ttagagcgac 1080 tcacctaccg tgcgttgcac tgctttgngc ttatgagtcc agtccccgtt ttttgccagg 1140 agaaacagcc ttgttcagca agattgacgc ttaaaagattg aaccgtccta cctccacgaa 1200 acgggccgct tccggccggt atagccatca cgttatggct ttgacttctg ggctagacgt 1260 teatteeege gettetetea gaacaagaag geacteacaa catgageage gaeceggeaa 1320 ggaagaagaa gtagcagaca tgcttgacga gatggaaagg cttcgtgctc agatggggcg 1380 agttgccgct gctttaggcg tccatcatcg tcgccggcag taatcctaaa gactactcac 1440 actgagccgt caatgagagt accacatacg aaatccagat acggtaggag ttgttcctac 1500 gctgctgcta tgtaccgttc ccgacaaagc aatctacttc cggggtgatt cgatgaacgg 1560 cgaagtggga tcaaaaagcg acatcctcgt cgagccctag ttccccaacg tcgtcaagac 1620 acagacaagg aacgtttaaa gccagttggt gattggctga ggcaggatgc cttgtgatgc 1680 attctgcatt gtgttgagac tagaccaata acagcagcga agcaaccaac tgaagaaata 1740 agaagaataa tcgacaataa acctttgctt gggctagcgg taaccataag acaaataaga 1800 ttgtatgacg atcaggtgtc gccctggcgc ttcgtatctg gatccctctt cccttcttcc 1860 ccctgacctg gacttcctgc ctcggctttc tcgcaacctc accaacaaca accaccatcg 1920 teaceteate gggaeeegae ttgaetgate aataatgeet tgeeeteege eaaettgett 1980 tttgcttagc tccagtctcc tctttcgacg gtgcggctgt gtttaccaat cataccagcg 2040 acgegeactg caettttgee aagetaggtt accagaetgt egggaeetea etatgeeett 2100 tttaacgaaa agaaagaaac aaatctctgc gctgttccgc cgaagagcga cgatcggaaa 2160 tgccaggcgc cttggagcaa tcttcctgcg gccactgttg ctgtccggcc ttccgtagca 2220 tgattegaga etegaaaett gegaeteece eteegtgaae etgaetgggt etettteace 2280 tegecetgae caagateest gaatgateet egteeesteg ceagaceagg tggaagegee 2340 catctctctc gtctcttccc cctccatcaa gggtgtgagc cctgtcggtc cgaacaaaac 2400 catttggcga gagtgaccgc ttctccagtc attccatcag tctatgcagc cctcttgccg 2460 gatccagcac gcatggatgg ctttttggac cggatcacat tatttcggcg ctaatttcct 2520 gtgcacgctt ctcgagcatg ccgcgcctat ctccgtccgg attgcagaat tgattgcagc 2580 aagccccggc cctgcgtagc aaccaggtac ctcctcccac acaccacac cccttcacct 2640

ccattcagt catggcagcc cacttctct ccctgcttct tctgctacac tcatgcaaga 2700 ccattctctc cgattctgcc ttgccaggca aggtgttgag ttgccgcta ggtttcttct 2760 ttacttcaag gagactttca tttaattgtc actggtttgt acctggctga tcgtctgagc 2820 cgctgtcaaa gagtccgttg cgaactattc ttatatcaga acatttcctc taaagtcctt 2880 gcggtgctct acactattac tctattctg cacgcctctt gtcctcgcaa accaatcgac 2940 tattgaaaca ttatcttgcg aatcgaaaag tctggctgca ggcaacactc tcgccgcagg 3000 gtgctatctg atccttatta ttattctacc ccatcagttt cccccaatac gccctacatt 3060 tcttatcgtc atgcattatt ctgcttgttc ggacgatgtc gagcagcgaa cgtatccagc 3120 ctacccgtac ccctcacaaa ttgcgccgaa ctctccattt cacgcagcaa attctggctt 3180 gggaatttca tattgcgaaa cagggccttc caacaactac gaccgaccgc agtcgtcggc 3240 cgaactttac cctgctgatt ggactggcca gttgatgcct acgacagtac cactcggcta 3300 ctccttcaac acaagcctaa tgacgccagc tacattatgc gagccctata tcggttctga 3360 cgtttccacg tcgcccctta gttactgcgg tccacaagca atgagtgcta cgt 3413

<210> 3180 <211> 1098 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3180

gtgcatttaa ccgtctatgg ctcgacgcct actctcaqag caacgacaac aatccqcaac 60 cacagtgacc aggaactgat cgttacccaa gtgacatcgc ttgtgctcgg cgggctgacc actggctcag cagaatggtg ggacgaatat accctgtcga ttccaacaaa ctcctggttc 180 cgcgaagctc aatggattga acatgatctt cctggccttg ggttagacga ctatggtgtt 240 tacgggcgtc cggagaacca cttcgcctcg cttgcgcact atgcggtctc aaacaggggg 300 acgttctcaa cggaaggcca cttaccgatg ggtctcttga agcgccgcga taatggcgac 360 acgtggttgt ggcaggtgga gaataacggt tcctggcgat gggagatcgg tgactggaag 420 gatagegtat atttggetge tggtggeeeg gtegagaegg ateatgaetg gagaetgate 480 ctccagccgg gtgaggaatc cacaacggtc cctgtggcgc tggtccatgt ttacgatgat 540 tatgagaagg cgttttccgc tttgacacga tatcgacgga tcattagacg taaacatgag 600

gataactcgc gtctgcctat tatctttaac gactacatga actgccttat ggtgacccca 660 ctgaagagaa aatccttgca ctttgtcgac cccgtcataa aagcccgggc tgagtacttt 720 ggaaatgaat cgcgggtggt atgcccacca aggcagggtg gtgggaatat ttttacaagt 780 tggaaccctt aaataaactt ttttcaaatc ggtttttct tttctttgtc cgcttaaaag 840 aaaaggttat tttcaggggt ttgtataaac cctaggggtt ggtctcccga tttggtttta 900 cccactttct tgaaatactt ttctcaccta gggtactaaa tttaaaatgt ccttttcggt 960 gattccgtct ttacctttt aataacatt anttgttatc taaggctaaa cctacaattt 1020 ttaattttt ttcctatcat cggtgttaaa tgtctgatca tttatatcta ntccatggtt 1080 tatttctatc tttttcca

- <210> 3181 <211> 1395
- <212> DNA
- <213> Aspergillus nidulans

<400> 3181

ccgaaccaag tgaaggatgc gatggtaatc agacccattc ccaaggccat tttcagacca agaaggccgg tggcggagag agcgccattg catgtggcac agacaaagtc taaaacacat tagttatgcc tcagagcgca ggggctgaga ataacatact tggtaggtcc gtgtaaggct gcggagtgta cattccaaag tagtaacggt tctgcgagct cagctctccg gcagaggcag 240 tgtcatcaat gtccttgctc tcgtcgtata caatcatggt gtaagtcgcg gtaagcaacg 300 gageegtgge gtttgettgg aatttteeeg tgteecaegt caeagtttgg gteteetega 360 cgctcatatt gctcgagatg gtgtaggtag cactgttgag actgcatgat gcgacaacat tgacagcagt gggtgtgata gatagcgacg tataattcca gacaaacgtg ataatatcac 480 cgatcttgta gtatgtcgtt gatgcggaac tcggcgtcaa catggagata ccacccggag 540 ggagacgagg gtcgactgat gtggtggtag agttcgaagc gtgagtggtc gttgaattcg 600 acgaggaget gecagtetta gtegeettgg cagttgtagt ggeagattee gttgtgtege tgtcgctgtc agaggatgat gtggacgtgg ccgtttcctc cgcctggtcg tccgtggggg tegegeeggt agtegeactg teggetgegg tegtagtate egagtttgag teegagteta 780 agcgatgtca gcacattgta cgttgatacg ccgacgcggt aataatgctc accatcctgc 840

ctaggcaaaa gttgaccgtg acccaacaac ccgtcaaact gccatgcggt tgagagcatc 900 gctaacaaga gcaggcacgc aatagggaaa agagcagtaa accgcatgat taataaagcc 960 cgtcggccgg attatctatc tcgtcctgtc gagcaagcgg gggtgtcaat ccccttcgct 1020 tcagtatctt atcaacctcg ggtgcccaca gcaacggatg accgacgtga ctaggcacaa 1080 caggtcgata tcagtgagac ggtgtaattc aatccaaaat cgaatgtggt tataggtagg 1140 cgatcaggac agtggtcgaa agaggccgtt gcgttggctg tgaaacggag aagtggtcta 1200 acaatcttca gggtcttagg ggtcttccag agcaggtgga gtggccggtg caacgagcgt 1260 aaacaagcga gcgactgcgc aatttgtacg agcaggaaca aaactcgggg ttggagaaga 1320 agcaaagaag tccccaggaa gcgatgagaa gaagaggaa gatacaaatg cgacagcgaa 1380 ggtgagagga aagga

<210> 3182

<211> 1099

<212> DNA

<213> Aspergillus nidulans

<400> 3182

aagctgacaa tacacagaag ggtggaaaat ttttgttgtt taggggtgtt atctgggcct 60 gtagacggaa gtcagtcgcg tgctctcaag agaaagcgaa gcagagaagg cgcgaactga 120 agagctggag ccatgaggac cagctcaagc aattgagcac tagagcagaa accaggcaaa ttgtgtcgac ttacttcgca ggcttggaca ggaatcgcag taggtcctct gagttcatgg 240 aaggcagaac cgattcgggc ttaaaagagc acgatggagc gagacgccac agttgtgaac 300 atctgctaga ttgctccaga caagagaaat aagagcagtg gtcagaatct caagtcagat 360 cgaaagacga gagacgctgg agagcattga gggaaaaaga aaagcaggca aacgtggggt 420 480 gcgcaggtca aagcaagaag ttgtcgccag cgctgggggg ttaagaaggc tttctacttt ttgagggggg gctgggctcg gcttaacagt acaccagctc cagttggcgc tgaggggtta 540 aaacgtgaat gacttgacaa agggctagca gacgcagagc gccagtaagc aattaaagag 600 aagagaatcc gccggagtaa gtcgggatac atagaacagt atagctacag ggaaggagat 660 720 ccagctagac ttaggggata aagtgtcggt ctggtctgga gtttatatgc cgatttgggt ctcgtgtgag cgtaatttat ttgacagata ccataccgaa gtataaatag atgagaaggc

ggtcgcctgc cagggactat gacgtctccc cggatcaaca tcagccccct ccgaccagcc 840
tactatacag atcaacctct cgagcccca gctgtcaatg tcactccacc cggctctctc 900
cgctccttca ccggtgaaga gtcttgacgc cgctttatcg cttaaatatt acatacatac 960
aaactccccg tcgtcaggct tcacatcgat gcccgactgt ccgacggggt attcccctt 1020
cacttaagcg cttttgtcag gttatgataa tcggccaggt catggcctgg ccaaaggacg 1080
cagtcagtat cagatgtgt 1099

<210> 3183 <211> 1362 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3183

tcagacagct cttcaacaac cacttcttca acctccacat ccacatcttc ctcaacgaca gccacctcta accccaatgc aacgcccacc accgacagcg caactgacgg tgaaagctct agcacagaaa atcacaacga tggtctctcc actggtgcca aagccggtat cggcgtcggc 180 gttacgcagg cgcgataatc cttgccgccc ttgccttcct cctctggcga cgcatcaaag 240 ccttaccaag caccaatgct gttgggcccg aaggcccaat ggaggataca gccaggttca 300 ccagggatac tttgctgatc caccaatggt caaggctgcc cctgtacctg catctggtgt 360 ggttgctccg atgtccgaat tggcaggaga ccatgcggga qaqatqqatg caqqtqctqa 420 tgctcggcga ccgcctgttg agttggacgg aagtgagctt tattcacatc atgggcggta gttgtgcctg ccaagcaagc aacaagttgc gtcaggataa taatccacag cgacgatgat geggetaege gtgattettg gaegetteet atgtgaeaeg cateagatae catteeteta ttactacttt aatcagaatc tcagttgccg taccggttgt ggttgcatgt atgtactcga 660 actcatcage egecactatt aaataccaaa ttettgeaet geaecettte aetttageae 720 cggctataac tctactccct ctcctattct cccacaaaca aactaggtct aattgaacga 780 gacaaactgc taaccgacga cttcactcaa cctaagacta cctcacgcac acaggcagtg 840 tgttgatgac ccgactcgaa acgaagcaac accganacac cccatggacc gtcgcacatt ctcaatataa cggaaccagt agcaccttat gcataaccag aggtcgtcca ctgacatcca '960

cgtacacgta ccagcactgt ccgtgccagc ccaaccaatc tgtcctatcc acctcctatc 1020 ccgtctatga cagcggtaca aatcactcga acgatcttcc ggtctatcca catactgacc 1080 gacccactac ttcgcatcgt ccactcctat accaacctta ctgctttttc accggtcata 1140 ctttccacta ttgatccacc gactgaccac cggaccacca gcggtctatt gtcatcagcc 1200 ctcagctcta agtctactta tcgacatccg ccaatcggct agatatcaag aacaagaatc 1260 aatcatccat ccaattccca tctatatact gttttatcc actacttct gtctgtgca 1320 ccagctgaca accacttaca ttactgatca acaaccttc cc 1362

<210> 3184 <211> 479 <212> DNA

<213> Aspergillus nidulans

<400> 3184

tgcacataca acaatagcga cctgtagcga tcggatctct gacgcgttct tcaaatagaa 60
tcagtttcag cgacgacatc gccaacggac acggctggtc agtactcgag cggcgacgaa 120
caacggcagc agccggacga ccggcagcag ggacgcaatt cttgatcgta gtcgcctgcc 180
agggtcggca aatagtacag ttaccggcta taaagcaggg ctccaatggg ttcgactatg 240
attgctcctc gtcttgatct ccggtaaact aacaggcacg gacatccgga gaaatcagtt 300
ctgttggttt gttttatgtg cgcgtgctct cagggcgtgc tttcggctcg tgccctacag 360
gcgttagaag attgaagata tctctttgat ctatgaccca cggcgatgca tccctggcac 420
ctatagcatg cttggcgtat taggctcaat cagagttcga agccatgtca tttttgcgc 479

<210> 3185 <211> 577 <212> DNA

<213> Aspergillus nidulans

<400> 3185

gccccatcac acattcattt tcaatattat gaagactgaa gaggcccatc aggtacatac 60
taggtgctta tcacgattat cctgaccttt gtgatacatt tccatcaccc actacccgcc 120
tgatgaattc aaccaacgcg gcccttccat cccccttcag cggcgcctca atatgcatcg 180
cccccttgac gttcactcga acaatgtcca gtccaaaatc tcttcctcta tgttcaagct 240

ggtccgccac	ccagggcggg	atcacctcaț	cattttcggc	ggagaggagg	aggatgggtg	300
gtactcgttc	agaccagtgc	cggtttcctg	gagagcttcc	ctggccctga	ttctgttgat	360
ggttaggctt	tttgtgctga	gcgagttgtt	cgagattgag	tgcgacattt	cagtgtttcc	420
acgagaacgg	atgcaaattc	ccgatggggt	tgcccattct	gcgggtagag	ggcgtaatgg	480
catttttta	ttcctagagt	tggatgctct	cgggacctag	tccgcttatt	tttcctcctt	540
ggcacccgtg	tagggtggtt	cctgttttat	ttctctt			577
<210> <211> <212> <213>	3186 471 DNA Aspergillus	s nidulans				
<400>	3186					
actcatgcat	cctgggacag	gggcggacct	acataggcga	tcggttggct	gagaaaacca	60
cccatgtgag	tgctactgga	attacatacc	tacatggaag	gacacggtca	cctgcctcaa	120
cctaaaatga	tctaatgtac	cgactctgtt	gtcatgggcc	atcttggtaa	ctcatagcac	180
acgggtcttt	aggatggaaa	cttgagatgt	gaagcatcct	ctgaatgttt	acccaacatg	240
ctggcactgg	aaccgtagga	acctagacct	cttactgtat	acatctttaa	ggccaagaca	300
tggggttgaa	attatccgag	ggcgccatta	tacccacaga	ccaagcctgg	cgtgccctca	360
atctatactc	ttgcaccaca	ggctagaaag	atcatgcccc	actatacaac	aacgattggc	420
tataaacgct	ggggggagcc	tcacaaagaa	aacggtttgg	gctacagatc	g	471
<210> <211> <212> <213>	3187 1997 DNA Aspergillus	nidulans				
<400>	3187			·		
agaaaacaaa	accaacacaa	cacccgaaat	tagtatagta	gaaggtttcc	cacccctata	60
taagctgggt	ggaaagaaca	ttgaggccgc	cctcaggttt.	cccaagaaac	tttcccgata	120
agaaaagtta	ggaggggctc	caaaaaaagc	ctgcagtgta	tccttggcat	ggggcaccgc	180
cccctttat	gggaagacag	tcaagaagcc	gctggcaaac	ccaacagacc	tgttgttgca	240
caaacaggtc	ctataaaaat	ggttgaaaag	atgttggtcc	ggcttcccaa	atctccgttt	300

gaataagcta ccgcaacgaa agaggttcaa cttgcagggt tcgtcgcgag ataaccacaa aatttggaac caagcctaca tcttcagttc cacgtcgata cctgtcgagc gcacacgttt acgtccggct ccgcgatggc gaatcatggg acaaacatcc cgcaagagct cctggtagat 480 tgtggccaag ctgaacaagc gcaaactcca tcgagggtca gctgcaatca gacttccgac 540 ccagtttggc cctattctaa taggcggcca gcaaccaaga aagataatat tccggtcatc 600 tatacccctt ggtcgaatct aatgaaagat ggctccatgg caacgggtca ggtatcgttc 660 cacaccccca agctggttaa gaaggttttc gttgcacagc ccacccccgc catcgtgaac 720 cgtttgaata aaaccaaggt tgcgaagtac cccgatctgc gagcggagaa ggaggactac 780 aagaaaatgc ttcaaagaga ggagagaaag atccgcgaga gaaaaagaac agggagaagc aggagaagag ggagcgggac agttgaaatg gcaaaaggac catgcatatg acgacttatt 900 ttcggaggag aacatggagg ccagcaacaa ccaggatcgg gatccgaatt tccttgatga ctttatgtga cggatgtccc taccactgcg atacaatata ccccactttc gatactacaa 1020 cttacctcac ccgatctggc attttgaggg cgcattgcaa gcgacgtgag tgtatagtca 1080 ggccaatggt agttgtagaa aatataatgt aatccgcata gttcttagtt ccggctcggc 1140 atcatggcag cactagcatg gctatttgac tgtcgttaag cggagtcggg aatggccggc 1200 ccgaagaaag ccttggcgcc ccggagtgcg ggcggagctt tctgtgagag gccacccagt 1260 acgtcatgtg aagctgccat gttctccagc ttacaggtct ggaatcctta acgtttcact 1320 gcaacatcag cettecactg attaagacca tgaattgtee atecegeace gatgataege 1380 tececeactg egactggaae cacageeege egtttetgge geetgaetta acaaeeegge 1440 atgacctaaa tggcatctcc aatgttcgcg agtttaagga tgctgccact gtggtcatca 1500 ccatgcagca ctgtctgcac gacgcagact tactgtctcg ttacaaacgc gaatctgagg 1560 tgttgcggca aatgcacccg agggcgtccc tgacccagtc aggtaggttt aaaacggatt 1620 ctgtgggtta tcgacaatgc attaacaccc gacaggacgc ccgaaagatc gagttgagca 1680 tgctcgatct tcttttgatc aaataaagag ctggtgctca tggctgcttt cagtgctggc 1740 cacagcgttt taattteege cagtggtttt gttgactggt tgactgggac cgttgtteet 1800 tttcgacaga ctactacggc ttcggttgga catctagtac tagataagga aactatgcag 1860 gtgcgcaggt atgctaagcg acaggcctgc gcgtcaggtg gtgtcgatgg tagtgaatac 1920

aatacctcgc	tacacgtggg	agctctgttc	atcatcctcg	gggtgtcact	ctcgcctgtg	1980
ctctgcctat	attggtt					1997
<210> <211> <212> <213>	3188 2723 DNA Aspergillus	s nidulans				
<223> <400>	unsure at a	all n locati	ions			
ccaagggctg	ggaggtaggg	catcaagggt	aagcaacaac	tgttttaaaa	tttacaacca	60
aattagccag	cattccgtgg	gcacgttaat	taattaactt	accccaaggg	acttaatata	120
gatcaatcca	gctattaatg	gaactttacc	taggatcatc	cgcactaacc	gtgctctaat	180
gcagcccccc	gctcgctcag	tcttagcacg	gcggctattt	ctcgtctcga	tgttgtaaca	240
gcaacactgg	caaatgcgcc	ggcttgcgcg	gttttaccag	ggtctcatgc	accttggtgt	300
ccctagagaa	attaacaaac	aagctggtgg	aaatcaaaat	tagaaacggg	cctgcctgcg	360
atggatatat	catggcctct	ccacccaagc	ttggttgtct	tgtggcaggt	cgatcaaaca	420
gcttggctct	attgtttggc	tctaggcaga	gcacagctca	agcctcagcc	ttaaaagtct	480
cagcattggc	atccatcaca	atatatacta	gtatcttgct	tactccttgg	ttccattata	540
atgtctctcc	accgcttncg	caacatagac	tnctctagac	ccgcgtacga	cagaagggac	600
gaccgtgctc	tatacaaacc	ctcatcatca	cgcacaccta	ccctcgaaga	agacatcatc	660
cctctcacaa	gctcgatatc	aatatcgcgc	aacaactcct	ccaagatgaa	agctcttgac	720
cctcgccgtc	tctcaatgcg	tctgaaacga	tcaagcatct	cgccctcgcc	atctccagct	780
ccctacgacc	aacacagcac	atcaacgttc	caccgaacac	atccagattc	tctaccacta	840
cctcgccata	catcaccttc	gcctagtacc	cgcaccgaat	ttatatacaa	gcccattcac	900
caaacggact	acaccgccgt	cgtagctgaa	acagctaccg	cccagagtcg	atcggcgtcg	960
aaatatcact	ataaccatct	tccagctggt	ccagcgagcg	ggaaacacat	ggggcgtggg	1020
aatcgcgtgg	aggagagaac	gatctcattg	cagtcgcgat	cgcggtctcg	ttccagagct	1080
cgacctcagg	ctcgcgcacg	ttatgcatcg	tatgacgagg	atgaaattaa	tgcaggcgac	1140
gatttatatg	atgatatgga	tggggagtat	acctccattg	cccggccagg	gagagactac	1200
tcaacggaac	tatatacttt	gactgcggac	aagaggtgcc	atcgggcagc	gaggcgctta	1260

accaccgtga tggttcctga tgcggaggat atttatggat gaattatgaa tatatctaat 1320 cttaattctg atgtcttgtt agcaatgatt agcaaatgtt gactgatttg gtatatccqc 1380 actectacea tateteegea taceatttga egteagtetg aegegeecaa ttegageeet 1440 taaccgatct acctccaacc ctgcccagat gaactgaagc aaaatcttgg tggaatggcg 1500 gacggtctcg gctcctgttg Ctggatcatg acgaaagatc tctcgatttg ggtgctgagt 1560 gtcctgtcat gtcatgcatg cggttacagg tacataaaag gcctatccag gtccacgtcg 1620 cagtggcatt aaaccatcaa tacataaatc ctcattataa aacgatatca acgcaaatat 1680 gactgacagt gtggttcagc tcaaatgcgg tgtcaaggtg tgttctacgc tagctatcgc 1740 ttaacttgct tatcggtttc tgacgtgttt ctacagcacg acccatgggg aaagcaaggg 1800 aaggagtete tegeeggeea getetgggee aagaeggeeg ggacaaeggg gatgtetgae 1860 aacgagacgt actctgaggc gtgtatacac tcaaagcaaa ttctggccgt gacatggcta 1920 accogtogot agatgtggat gggtacatat cocaccgtoc ottoacgact gottoggact 1980 ggagaaacac tggaaaacta tcttaagcgc aagcccgagc tcatcggcca gtcagtgaaa 2040 gaaaaattcg cagacaatat tccgttctta cctaagatcc tctccttcgc gaaagccctc 2100 ccgcttcaag tccacccgga caagcgcgta gcggagagcc tgaacctcaa agacccggaa 2160 cagtteggeg aegeaaacca caageeegag ategeegttg ceetgtetga gttegagete 2220 tttgcgggct tcaagccact aagcgacatc ggggccctga tgaagctcaa gccgctcgaa 2280 cagttegtee eggegaatae tgaacttgae gaegaactge ttegeeagat ttgeaaaaag 2340 ttcctgcagt tgccgcccga gagcgtcaag gatattgtca cccagctctc aaaattgcca 2400 aagagtgagt ttggcgcaaa gcatgagtat gtgccggctc tgctggagcg cgtgagccag 2460 cagtactcgg agtcggataa cggtgctctc gttgctgtac tgctgatgaa ctacatggta 2520 ctccagccgg gcgaggccgt ctgtgtccca gccgacagta tccacgccta cctgaagggt 2580 gatatteteg agtgcatggc geggteggac aacgteeteg egaegggttt etgeeegcaa 2640 gctgacagga acaacgtcga ccttttcgcg aaaatactct cgttcaaacc gcacagtatg 2700 gagcaggcac agctagatag gaa 2723

<210> 3189 <211> 2756 <212> DNA

<213> Aspergillus nidulans

<400> 3189

tatgaggcat tttgcttgag tttcgaccag acctaactaa ctttttttag cggaggatgc 60 cggccctatt ccgggtctag tggcctgatg tgtggtacat tcacatagac aatctatggc 120 tgtttcctcc aacggacttt tgaccgcggc cccaatgcca gattggttga acagacgaat 180 gatcaaacaa gaaaatctaa gtctagacaa atcataggta tcatcaataa gcagaaatgg 240 300 gccaaaaaat cgtcgagaat caaaatgaaa tctaatcaca taacgaattc gctcatccaa agtaactccg taggccttca aatactgtaa aaatgaatgc cgagcttggc gcagaccgcg 360 cacaagtgat accacageet egatatagge egegaagtee ttgetgatge eagagageee 420 tageggegee eeegaatgte tgtegtttge tagatgtgtt gttgatatet tetgtetgea 480 atctcgactt tattgtgtcg gctggataaa agaggaaatt gtagctgaca ccggctgctg 540 ctccggccaa catctgttga taaagaggga gtgacccaga ttcgacctca gaggaaaagg 600 ttgtcgaagg tgaataatgg tatgaacgga aaagtgctga caccccttcg taacccccaa 660 720 accacgcage accacegeee gteteaegga taagegtace eagttggeeg egecagaace 780 ccaagacgcc gtcctggcgg aaaacagaga ctataatctt gaggggtccc actcgtgcgc tggaaggctc cgagggcact tgcatcttgc atttgatgag ctcgatcggt gtcaaggcaa 840 gggaggtgat ggatccggat gcagcaccgc tgaacaccaa agcagttaac ggtaacggct ctgtcgagga atagtacgag gcctgaagta gctcttgaac cacacggtaa ctgaagaaca agcagctgtt ctctacagca gtcccgccat cggagcgctg attccccgat agagaccccg 1020 aagaccctct gcctggaatg actgacggaa acaatctaac ggcccattgt atcggagagg 1080 aaggtgatcc ggttgtgact gaagcctaac cttgaccgtg tcaaagggat attcaatgac 1140 cttgcctatc attcctgcag cctaaagatg gcgttagcaa agcccgtaca tcgtagggga 1200 cttccggtaa cttactgatc caaaaacaat atctttgaag gcctctagac cttgattggg 1260 ggctagttca ggcagctcca ttgagatatc attgtgtatc gtcaacgcac tttcggtagc 1320 cgccataggg atggatatgc tgagcgctta aagccaacgg tcgtccgagt agaggaggaa 1380 aaagaaggaa ggaaggaagg aaggaaggaa ggaaggaaga gtagttggta gattttatcg 1440 ggaaagcatc gtagaaagga tgggtgcaag gtgtttaaga gacagagtgt gagggggggt 1500

gtaccgacga ggggtttggc gttgcccaat ccacgcgtgg tacctgaaga gctcagaaac 1560 tagaaagcat cgcttgcaag ctcgagcagt agaaaggccg aaatgcggga tattttgagt 1620 ggtgggggcg ccttttggct tcggcaggtg gttcgttgca ggtttgcgac aattcttttc 1680 agcagaagac cggacaatcc tcgtggacga gtcatcctcg gggcggctgg gtgggcccgg 1740 ttcaccactt cccccgagat ccgtttatct gatcgggcta agataacttt ttcgaaaaaa 1800 atcgagtctg gccgtcaggg tgaagcccaa cttctcccct tggcctcttt ctcagtaaca 1860 cgtccttagt ccccttctag ctctctcaga gttttaccat gtcgtccgca gctccagcac 1920 cctcaaccca tgcggccaaa tcaatacgca agaatggtag gcgtccagcc ccccactttt 1980 ctcgccaact tttccttttt cttcctggct aatcttccgc cgtctcggac ccgcaggtaa 2040 aaactggcat gacaacaaga agcccttcag gcccaacggg ggtttaacct cgtacacaaa 2100 aagagcggct gcgcggaaag aacaggaggc tattaaggag tatgaaaagg aattgagaga 2160 ggaaagagaa gcagagagac aggtaagaaa ctcgcgaacc gcatggctcc attgcatatg 2220 acgeetteeg cagagactga tteatgttee aggegeacat ceaaagaate aaagaacgea 2280 gagccgcgaa ggaagagaag gagcgatatg agaaaatggc cgagaagatg catcgcaaac 2340 gggtcgagcg actgaagaaa agagaaaaac gaaacaagct cctcaactct tgaacaatgt 2400 tatcagtgtc agtgtgcata tccctacaca tctgcttctg ggtttgtcgc tgagttcgag 2460 gagactecet tatttgtgca taggttegge gtettaggag ttagggette aaggeetegg 2520 cgagcgaatg cgttgtttct cttgattgct tacttcggat tctttgctcg acatcttttt 2580 acattttgac atcggtcatt aaccacatag tcgctcttgc atctgatggt caattgctaa 2640 gaattgtttt tacgtcacac tgtatcgcat ttggctcctt gatgatgtta taatcaagga 2700 gaaaactacc cttaaaagtc ttaattcctt ggccctaagc ctgccagcag gagtac

gagatgaaaa ttaatataaa aaagtataga aataggtgat gaaaataaag aaaacataaa 60 gaaagtaaat agagaaaaca taaatcagaa aaggaagaaa aacaaaagaa ataaaatagt 120

<sup>&</sup>lt;210> 3190

<sup>&</sup>lt;211> 1239

<sup>:212&</sup>gt; DNA

<sup>&</sup>lt;213> Aspergillus nidulans

<sup>&</sup>lt;400> 3190

tagatgagtg tgagtactaa gtagaaagca atagaagatt atatgaaaaa taaaagataa aaaataataa aaatagggaa tatttaaaaa agaattaaaa tatgaataaa gaagtaagat atagagtgga aaggaaaaaa ctaaaaatag atatgggata tagaacatat aaaatagaga 300 aagaaaaatt gcagaatact aaataataag aaaatgtata aggaaataga aagtagttgt 360 gaaagccata aaaatataac aatcagtaga acaacaaaaa aaaaagttaa caagaagaag 420 aacaggaatc attacaagac aagaggatca aatagaacga atagaatgta gcttaaaaat 480 tttcgatgag gacaacttca tgattccata tccatatcca aatccatatc agccatgtct 540 tectectite geettecate treettette eteteceaca reeggtitt ettettitgt 600 cgaatacagg attgcaggat catctggagt tggctgctcc tcgccctqqa acccqqcqaq tcgccaatta ctgggtgtct gtgtccgctg aacctcagat ttgcctagaa tgttccctc 720 cttgtccaaa gcttccacgg acacccagtc caggtatcca tcggcaatgt acattgtctc 780 aaagtcagtc ttgaccgtgc taccaaccgg cactggtagg ccgtcttctg aagaccgtgc 840 gtaaaactgc catgaagcaa tgtccgtcgc cccgttccag ctgacatgga agatagtggt 900 caggtccgcg ggttccgtgc cgtacacaga tgcaacaaca tctggtggtg tatttgggcg 960 tccggtaaaa gggtatttgt aggatcggta cgatgagagg cgcgtggaga cgaatttagc 1020 ctccatcaga agettgeegt cegggteatg etegetgtgg tageegeget cactccagee 1080 gacgaaggtg ttgccatttg gcagagtctg cacattacca cgcagtcqag tqaqqccacc 1140 gtogggtota ttgatgogot tgataacoot ogoggtoatg ggggaaacag tagtgogago 1200 tgcacgtaca gagcagacta cccgtccaca tccgcctcc 1239

<210> 3191 <211> 1450

<212> DNA

<213> Aspergillus nidulans

<400> 3191

gtagagacga acgaccattc gggctgggac aacagtaacg ggtattcgtg tggc tt 60 atagtacttt agtttgtgtt gtctatcgat gggcaatccc atgcggggtt gaccgcccgc 120 cagttgccgt gcccacatg ttcgggaacg ttaaggttgt aagcgataat aaggtaagcc 180 cttcacaaga cgtataatgt ttacatgtct ttagcctatc tagaattaaa tacaactaga 240

gccacaggcg aaagaccgga agttgtggct cacacagtga caacatgcta aacatgcgtc 300 aggccatata agtctgagga caaaatcgca atagatcaga tactaacctt ccatgagatc 360 ctgatcccag aaggaaaaga accagggttg gaacggctga gagaccaaaa tacatcctaa 420 aatagacaga cgggacatct cgcacctaca gtcatagaag ggaccagccg tcaagccagt 480 ctccgtcgtc gcaagacatg gagcctttcg aacatttcat cacatgtgcc gaagaagata 540 agtcagtctc ggatttcagt tcttcatcga gtcatagctc atcatcatgg tccatttccg 600 aaggettgag gageeeteea acceteatge gegateaege teggeageet tggeatettt caaagcctgt tcccgttctt cggcgtacag ttcagcatta tccccagcaa actccttcaa cgaaattaaa aagtcacgaa ggtgtgtctt gaatttgttg aagtcgtcat tgaaagcaaa caggcccacg acgaattgct tgatttggat tctagcacgc aattagacat cggacaactt 840 ttataatggg aaacctgaga acttactctt gcagattctt gaaagccgtc tgtaaaagat 900 ccgcaacgta cttctggagg aaatccttat tggatgtccc gataggtgct tgttcagggg agtagatggg atcttggatt ttgcctgatt cgatgaagta aaacatccgc gacagcagca 1020 tagcctggga tttgaaacct ttgagaaggt tagtactgtt gtatttttcc tcttcgggcg 1080 gcaccgatga gcgtacctgc tttatgatca ctgtctgtga gtacgaaaaa tacatcctgc 1140 aagattggga tgtagaattg acggaagaag atgttcgacg tttgtacatc tacctcagcc 1200 atgttgttca taagttcgag gcacattgtg agaccggtat tttcaacttc ccgattatcg 1260 tgcttacttg cccacatgca agaatcgatg acgaatttga attgtgtggc gtctagttta 1320 agcagtgccg ggaaacaata aagattgatc gcttgaagca gcttgaagaa ttgaattctt 1380 gggtcaggga attcatgtaa gtccttgtta tcattttcaa agtgcattcg aatacacttt 1440 ccatgatagc 1450

<210> 3192 <211> 1074 <212> DNA

<213> Aspergillus nidulans

<400> 3192

gctttcgccg gtattcccaa caggaacttc agccgtttcg tttttgacgt gggccaccca 60 gaactcgtaa ctgctcggat cagattggtg aacactcatg atgcgtaagt cgaaccatcg 120

tgcacccacg cgaagctggt cgtaaatgtt gaggccctgg gtttgtgtgt tggcctcgct gcctatggag acgatcttac cgctgatggt gctcatgcca gagtcgtgcg tgccgggcat gacaagatgt tgcagcggcc tgtccttgat cacacggtac atttgcttca tccagttacc 300 gctgccatga gtgagtgacg ccatgaatcc atagctgtca ctgcccgtga tgaccaaagt 360 aaccggcacc tccgctctag gatccaggta ctcgcgttgg cctagcccca tatcactcag 420 atctatgact gtacggcgcc agtacatatg cggaacgtga gttgttgctc gaatctcgaa 480 tttcttgctt gtgcctacaa tcgagtaata agcttcgccg ccggtgtcaa cggggtttgc 540 tgtcaaccta gtcgagtagt gggcaatatt ttgtctggcg cggccaggtg gaatatcgcc 600 ccagtcaaac atatccatct ggtatgagtg cgtgctgtcc agcttgaacc gatgaggggt taaattaaca attgttatgt actgtcgtcc gaaagtcaca tcgtcgagcc cgagtgcgcc 720 ccaagtccgt gtattctcct gctggcatgc tctataaact gtacgtcgca tcatctgcac 780 tgcatacaac aacggcctgc tgtggcactg ttatgccaaa tcatttgccc ctggttcagt 840 ccatatggcg cggaagtaaa tgcagccagg gccgagcaga ggctgggcgc tccggcgagc ccagtcaaaa tctgactaaa tttcataatt ggtcactgct ccaagaagca ggcagttagg acatactgct tcggaagatg gaagagcgca ttaagtggaa aaataacgag agatggaaga 1020 1074 cctatttaag caatgcaccg cgatctcttg aggcggcctc ccaaacaaac ccac

<210> 3193

<211> 3674

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3193

ccacgaaccg gcgttcattc gcgtggttga gaaacaatat tctcgagacc cttacgaagg 60
ctccggctgg tgggccagca tcaatgtggt gcttgccata tcgcatcgtc tacgtgtaat 120
gagcaacctc gtccctcaag aagaagacaa aaaagcttgg ctttatctaa aaaatgccat 180
gggcgtgcta acagagctta cgatgcgaaa tactgatctt ttgagcgtcc aagcgcttct 240
aggcatggta ggtctcacat tcttatatcg gtttgcgatg cagatctaat tctcctttgc 300
agtcactatt ccttcaaggg acgccaaatc cacaaccctc gttcttctta gtcgctgctg 360

ctattagatt atctcacagt attgggctcc ataagcgtgg gtctggtttc ggcctgaatc ctgtagaagc agagcaacgc aagagagtct tctggattgc gtatatgctg gacaaagagt 480 atgctctctt actcccaaaa gagattcatg cctaactttt agtatagcat ttgtctccga 540 teeggeagae egeetgteea ggaegaegae gaeatgaaeg tegagetgee gagtgaagat 600 cctccagata atatcggtaa cgtcccattg ttcgacggga aagggaagtt caacatgttt 660 cgcaccttgt gcaagttctc tattattgag agcaaggtgt acaagcgcct ctactcggcc acagetteca aacaatetga tggegeeete ttgaatacea teggegaget egacagggag ctcgaggagt ggaaagatag cattcctatc gattttaggc ctgaacatga aataaaagca 840 acacatgggc ctctcatatt gcacatcgtc gtgttgcatt tcgcttatta caactgtttg 900 acaacaatac accggatgtc agttcaccat gggtattgga caagccgcct ttccaactat gctattcaag gtctgaatgc gcgaccatta aatccgcgag tgttcctatc ggccgtttta 1020 tgcgtgactg ctgccagagc gtccatcaac ctgatcaaat atatccccca aggtgatttc 1080 gcctgtgtct ggtaagtttc ggtagcgtaa gagcttgttg cgaaattgtg gtataactgg 1140 taactaggtt gatactttac tacceggtet eggeattggt gacactgtte gegaacatee 1200 tccaaaatcc aacagatgcg cgggctcgct cagatgtcaa acttatgaac gtggttgtca 1260 attttctctc tacacttgta tctgatgagt cgaatgggag catcaagcgc atgcttggtg 1320 tatgcggcga attcgagaga attgcgcagg tcgttctcga caaagccgag cgggagtctc 1380 aatcaaagaa gaaacggaaa gctggaccgg aagagcctag ggattcacca caagcagcaa 1440 gcacaacttc aacgaagaaa aatacagcca atacatcggc tactatgcct ttttcgcccc 1500 cgccgcaata cggtgcagat tcgcaggata gtagctctaa tgctgcgaat ggggcaacgg 1560 ctttcacatc gagtcagaca atgcctggaa caagtagcat ctctgacatg tcgggaacta 1620 tacctgccat gcccagggct agccaagatt tcaccgaaat gcttggtccc aacgccctgg 1680 atggattgaa tttcaatage cageeteete taaegtetae tggtgatgtt eecattgege 1740 agccattcca acagccgttt gtcccacaag atctttggca gatgcctatg acaatcgaat 1800 gggattgggc agatatgtct acgaactttc ccgtcttcga ttcaggtccg agtcattagt 1860 atttacgatg aaacgaacaa ttccgatttt gctgattgtc ctccccctc atcccaaaac 1920 ggcaacctta ttgatgctct attgcgattg tacgaagata ggtgccaacg gggtatgagc 1980

tetgeaacte tecaettata taatettetg ttattgatat tittgetattg gegaggagte 2040 tggaaaggcg ttttgtgagg ttggagcatg cataagtgta cctgtacgaa ggatttggtt 2100 tctctggaca ctccacgctc tgctgtcggg gaagagtagg acatcgagtt tagatggata 2160 ccgcaggaat attctcctct attactgcat cattcattat cgacctcact ggtagacccg 2220 ataaatcgaa gtgttgagga ggaaggccgt agccctagaa catgtgttaa ttcaattaag 2280 acacctagat tacgttgtaa ggtccaaatg acgctttccc aagattttaa ggaacttagt 2340 ggcgttcgat gactccgtac cctgaatcaa agacgaacca gggatgacgg catcgtaact 2400 agttaaaatt gtttaactat cttatgtcac ggcagactgg atgactcagc cggaacgagn 2460 aaaaaccagg teegateeaa eeteeegaag egggegaega eagaéaagtt caccaactga 2520 ccttaacaat tccaactgag tgacacgtat tcacgcccga ttcgcctcgt gagggcttcc 2580 atggettget gtgetagatt ataaacteta tataceeett teegetteet eegeeeegea 2640 cetteagett etgggeteae etteetegae eatggeeage taetteegae ggeeaggeaa 2700 tcttgctcaa atactcgagg agagccgcag agcacatctt tcgcgccaga ccacttcaaa 2760 cgcgcatttc acaatcaaga ctatggtctt tatacacagc acatcgtgta aggacattca 2820 cttcgcaacg tgacgttgac ccgaaacctg agaggagagt accacctact gaaaacgatg 2880 gcaaacaaga cgacggcggc aactcgcagc ctcctcaaaa gcctgagggg cccaaggatt 2940 cagaggaacc caataagcca gaggaggaca agaagcctga gcagcctccc tcgaagttaa 3000 ccgcggagga ggaggagcag gtcaagcagt tcttcgaaca catgacacaa ttttttccgg 3060 cctcgcaaat caacgacctg cgaatattcg tgagaatatt acaaaagaat ggcatgactc 3120 cggagacacg gcagtttatc gaaaagtata tcgtcacggg gaaggagccg tcgatgatgg 3180 agtacatgcg gatttctacg catgtacaat atacggtaag gaagaatgcc agccaagaaa 3240 atgagcagaa ggatggccag aaggaagaac agaagcagag tgggcagaat gggcagaagc 3300 aacagggcaa gagccagccg gattttccag atttaaaacc ctgggatttc aaattcgacc 3360 ctgatcgagc ctgaaaagac tgctttcgct atttcatttt acgaagaatt ttcttgggga 3420 caatgcaggg tatcaatggg aggggttgga caaattttga taagggtttg gggagatgcc 3480 ttccaaaaaa ctaggttggt aaatgaccga tgggggttaa cacctgatac ttggtttaca 3540 atttatttt attgggcctg gggttgggaa actcccccat tggttgttca attgggttct 3600

tttttggaaa	caggggcccg	cgttcctccc	ttagtgggta	ttttagcccg	tcctaaagat	3660
attagaactc	tgtc					3674
<210> <211> <212> <213>	3194 1003 DNA Aspergillu	s nidulans				
<223> <400>	unsure at a	all n locat:	ions			,
gatgggttga	gcgcaagagg	ccgcacgggt	cacctagcag	atcggtcagg	tcagctccgc	60
gatgcataat	cggagattag	agagcgcaaa	acttactgca	gaagagatta	actcctcgcg	120
aaccatgatg	ccttaatcgc	aattggcttc	tacttagtga	aggaaaaaaa	gcacggattc	180
tgaaggagaa	aggggatgaa	gatatggaag	gcagttggag	taagtgctgc	tatctgtacc	240
gaaaacatga	acctcgggac	atctcgcctc	ccattactag	cccggcgccg	agcggagact	300
tccccagaat	ctcgtgatgt	ccggtctcgt	gactttttac	tggcagaata	gagaccgcct	360
gttgttcacc	gcctaacttc	acggcccata	agtggcagat	ttggggggct	cttgtttata	420
tcgggcatct	gcggttattt	acctatcgcc	gacgttacct	cttattcgta	tcaccctcta	480
cctctcaacc	tcctttttt	tgggttttt	ttttttcat	gataattccc	agggtacttt	540
gttgctttgt	gtctggactc	attttccttt	agcaaataac	tggctcgtgg	tacgctgctg	600
tcgcagcttc	ctaatccacg	atgtcgcaag	atacaggatt	gttcagcatc	aaacgtcccc	660
gcgaggtaag	cctggtgccg	cctcttccta	tgccacactg	cttttggaca	aggaactgat	720
gttttctctg	tacagacatt	ggggagcgtt	caaaatttct	catcactacc	acagcccgtc	780
gtcagcccta	aagcgcacca	gctcaattgg	ataccaaaac	ccaccgttca	cttcccaaca	840
cacgcgctcc	atgtcattat	taaactcagt	tggtcgcccg	caacaaccaa	acttcagcga	900
tcgtctcggn	gggggtttgc	ggcggatccc	gntcttcatc	tgtaggcgct	ctgtctcagc	960
aatgtcttta	tggactagcg	cntgacgcct	agntttgccc	agc		1003
<210> <211> <212> <213> <400>	3195 1197 DNA Aspergillus	s nidulans				

ggagacgcga tgacgaaggt gaaggtgaaa aggagaccac agtcaagcag cctcagttcc ggatatgggc gaacgaaagc gaaagcagcg atgttgaatc caccatcggc gctaatgaag acctagaccg ctacgaggat gacttcgtgt tagaagacga agacgataaa ctcggagttc 180 ccagcgggct ggaggacatg ccaatcgagt tttcgcgtca tgcttacaag cagctgaagg 240 actacttcca agacgccgtc gaatggatgg tgcataatca gctaaatcct gcgttccctc 300 gattcgatcc ggttttcaag gtggctttcg acaagctcga agctgaagtc cggggacgta 360 ccggctcaca gctagtctca tctgtctgga acgcagactt ccgccgggca ctcttagcac 420 480 gaccgcattt tgaagtcacc acatacccaa ttgatctctg tcacccctgt gatgcatgca ategtteegg geaccetget titttegaca tggaacteta tggcaaagca tactteetgg 540 600 acaccttgga gccggttgcc ggcgccgaaa gcgacgaaga gcagtcggac aatgaggacg atgagcagga gcgtgaccgc gatggctata tcttaccaga cgaagatacg cgtttttacc 660 tgggaaggtt cgtttccttt acttttcttg tagagagcga atcattttga ccattctcag 720 acattgtaag aagaacgcgg tcctggcaca tacattgacc cactggcgct ttcacctcaa 780 cgaatgggtg gtcgagcacc tccgtacaac tggctacttt tcagaagaaa aaatccttaa 840 acgtagccag tacagccaga agaagaagaa caagcacgca gcaaaggctc tgaataagat gategagtee ggtgagatta agaagetttg gegtgaettt catateaace ttagggetge 960 gagggaatcg acggtctgat tcacgcttgg gccgatatgt cctccctcta ccttcttctg 1020 ttcgtaccgc atatgagttt cttcagaagt gcatcttctg gccatttaca tgcatatcag 1080 gtttctttat ggatggttct cgatacgatt tcgcccgatg acaccttcat ttgcctgttt 1140 tctttctctt tttcttttt ttttttttgt gcttcttctt ttcagggtta tatatgg 1197

taatataaaa atagatataa atgtatgtaa caaatatatt aaaaataaag acttggtaat 60 tcttaaatga gaaaataaga tgaaaaatag aatctactaa taaatgaagt ggagtaatag 120

<sup>&</sup>lt;210> 3196

<sup>&</sup>lt;211> 5935

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

<sup>&</sup>lt;223> unsure at all n locations

<sup>&</sup>lt;400> 3196

aaataagata aacagaataa ggaatgaaaa ttagcaaaaa tttaaataac caataaataa 180 aagtaatacc attggataaa gagtacaaga cataagataa aaattttcac tccaaaatta cccaaaaaaa gaaacatgga atcatacctg gggcaaatta atgggagacc aaatactatc 300 catttatgat ttctttcgat cagatgccgt gaggcaaatc cgctccggcg gcagcctcat 360 tecegecata ageacactgt tacttgeege aggtttacea geaceegegt caaaceecet 420 cgtcgcaccc ggcagcgcaa ctcgattcct ctctgctgca acatccatga gaaactcctt 480 tggtagaccc gtctggaact gatagtgtaa tcgcgacgcg atgcttagtc gtaatgctgg 540 caatgtcaca gagttcactt caggtggacc cttattccca ctgcttgtag tagtatccgc 600 tecegteece gegtateett etgttgtaag atgeacegea tettgtaaca egeeggatgt gtagcggtat gcaaagtcaa ggagctgcag ctgcacacgc tcttgggagg ctgtgacgcc ttgggcggca agcagcatgt ggatgaagcg gacgtagagt gggcgacggg acttgccgtt 780 840 tgttttcata aacgtttaaa agaatttgcg cgggttggga agctggtgct gggtttgttg 900 taggcgcgct gatcggctgt gtcggatgtt gtgagggggc cgccggtgtg tttgtggttg aggeattgte ggttgatgag ggtteagetg ggggtgtgag eggttgegtg gaaggtgeeg 960 cctggcttgg tgaggccatt gtggtgtcta tcgggctggc ctgtcgtatt ctgaatccgt 1020 gtagtggtcg tgcagatcgt atggattcga ggagagaatg tagtgaggtc gtatgggctt 1080 agatacctgc tcagcaagtt cgtttcattg ggctccaaga ataggtcgcg cgtggggttt 1,140 caggcagccg gtgaaagaca ggaacggcga gaatatcgaa gaggttggga ttggcataag 1200 gcgaagatca agacgacagg ttcatggtag aagtagctgg tctgagattc tggcgatgcg 1260 cgctaggcca ggataggaag gctagttgat atcaccacgt gactctcaag caataatcct 1320 tcaaggtgtt ccttctggca aacttccnac attaatcaat ccttctactt gggttttgga 1380 tgctcatgga agctttggta ctggtgcttc gaactgggat aagtcctaat tggctctctg 1440 tatagegett caectgeegt eccaagttgt tgtataette tgeaatetgg getgttatee 1500 tgtggtcgac ataatgcgtt caatatcaaa aggtccttgg ctttgcaggt gccacgtact 1560 gctttgttaa aattcctcga tacagctcag gatcttcatc gtcatttaaa taaagcaagg 1620 agtttgactt tgtgcttatt tccagattca cggcctcatg aaacgacagg agagtagaat 1680 gttgatgete acteagegae eggageagge tgaacattet tgtgeaeggt gaeaataetg 1740

taggccctag tgcttgggaa tcggctggct ggtatttcgt ctcatgggag tacatttctg 1800 cacatcacat caaaccgaaa gtctttgaga cgacggggct gacaagctgc agccaatccc 1860 tacggatgga tcatgatccg aatatgccag tgttcttagc agattagttc tgagataact 1920 ggcttggcct ggaaccgtcg ttgattttag ttatggaatg acttcatggc tatcaagtcg 1980 taactcgaca cctttggcat aacaaaactg cctgctcacc aggccggtgc tgcaaccatc 2040 ttggtaagta aagtggtggc tgcggcttat agccattaag aatcagtata agcatatctt 2100 ttatatatgt actgtggacc atcgcgaaat gctctaataa acaaccccat catccatttt 2160 atcatcaaaa taaacttcaa cctgcttttc caacatcacc agatctccaa ctactgcttt 2220 catetecaaa ateacetgea teaggeegeg etgttetage ttetecegaa getggegeet 2280 ggaggtgaca tcctcaaggg acccaatata ggaattgaga gacatcaatg cacggcacaa 2340 gtacctttgc cgagagcgct tatcctgaga tgattctgcc gcggtggagg cccactcagc 2400 gagctgtaat cgaatagtgc taagccagac ctcgggtggt gtggaggcag agaaggtagg 2460 cggatctgtg cttgtggacg ttttgcgagg gactttggtt gagcccgtcc gatttgagaa 2520 tatteggeea tecatgggtt gggtagtegt ggtgeetgeg atgtetattg atteaggatg 2580 gttgatgttg gtgagcatgg tggcatgaaa cgcaatcgaa ggtatgtttg cagccaggga 2640 teteaaattg aatactgtee etggaaaatt eagecataet gagttatget gtaagaatag 2700 gaaccgttat gcctaccatg actgtttggt ccccggggcg ttggcttcgg tggcagaaca 2760 ttctgcgcac ttaggagctg ccgacgtgat gatatcagat tcgaatqtcc tgactgtcca 2820 tctgcataat ttgcaagtcg tagaggctct gatgccccac ttttgggatg gccttcaggc 2880 cttttttggac ttctctttga ctgtagcaag gcatctacta gaatgtcgac ggacgagagg 2940 caccattgga cctccgcatg catctgttca agcttgtttc gatatgacgc ccactgaacc 3000 ggaggaagtg atcgactcct ggaatgcact gtattggact ccttctgttt cgcttggtgt 3060 tggttattat cagaaaaccc ttggagttcc tttagcacgt aattgcagcg gaggatcaag 3120 acaccaggtc tcttgaacac attgctagtc gatgagtcag ggtcattgct ggttaggcca 3180 agaatgctaa tatactttgc aagatggcaa agtgagcagt gaagtgagaa gagctcgtcg 3240 gatagttcgc tcacaagaga ggacggcccc tccacgcccc gaaatgagct gtagagtgca 3300 tatgcgaget gggccaacet ggtaacatgg ettgegteae agaetgageg egggceaete 3360

tgctgagccg tctgaaaatg tgtcgttaga tgaataggct tgggttcata cgattccagg 3420 ctcctttcca ccgtgggtgc ctccacaagc tcggctgcag ggatcacgga caaaaggtct 3480 tttacatatg cagcggcggc cgcagcagca tacggctgcc agctcttgtt cttatgggta 3540 tcacagtagt cacagatgcc ccgaacgata aggcatggga agccgttcat caagcctgca 3600 gettecatet caaageacag cacaceeeg agetetttae teageeggte tegagtaatg 3660 ccgtttctga tgacctggtt ccccgatgcg acagttccat aatggatttc aactgcttgg 3720 ttctctcttg gctttcgaac gaccaggtgg tcttcactgc atgcgtcgca ggtcggccct 3780 cccacgtggg tatatgttga cgtgaacagt ttgtcgtatc cagcattgac acgctgaaag 3840 cggggtaagc tgtcaaacac cgataaatgc tccatgacct tgctacggtg tctcagatgg 3900 tttgcgcgca acttgctcag ggcgttgagc aggatcggag gcgggcaatt caggaagccc 3960 tttcgtatga accccgatgc tgtcgcggtt ccagcatcat actggacgac accaccatgc 4020 tctccagacg gctggctgac aaccacatcg ccgagtcgta ggtcggtagt gcctggaacg 4080 cctccgccaa cgcccaccat caggccgaat cgaagactgg gaaactttgc ctgcattcgg 4140 atggccacag tggccgcaga tgctgtgccg tatctgccga tcagaagaca ggcaatgaca 4200 acattgtgat accegattcg gccaagggta taaatgttgt cgtcgttagg gtcgtaggga 4260 ggtcgtatgc tcctggtcca gcatttttgc agcggcggct agttcgacgg ggatggcgct 4320 gacccagccc accgtgtagt cctgtgctcg aaacatatcg tctgtctgat ttgaacgacg 4380 ctggcgagaa ggctcaaaaa ctatcagtaa aggttgacag agttgggcgg ctattattac 4440 cttgtacgaa gctgacttcg tataattctg ggattctctg cggggatcga acgcaaggct 4500 gaagetgaag aetaagataa tateeagete agateetgtt attatttte ttgegeatat 4560 ctgcccacgc caactcacac cttgtcggaa aaatggtcca tatcactgtc aaaggcttag 4620 aggtggaaaa agacacggct ggttcgagca gcacgagctt tgatctgccg gctgagacca 4680 cgctcgccga ccttgttcgt cagatacgtg agcgaggata tacggccccc gaggagctcg 4740 ctcgagaaag agacgacggg cgtcgtggcc gtagttataa gccgtatgcc aagtacttgc 4800 tcaaccatcc tactgagtcc ctagtagttt cgggggactg tccgtcaaat tacgatgaac 4860 gacgcatcaa tgtacacgat acctttctcc attttctcag ccttcagtcc ccgagcaagg 4920 ctctctcggc aaggctggaa ggtgaccaga agattctggt tgacgatcga ctcgaactga 4980

tettteateg caecetaege atgecegaeg atgacaagat ceateceete eeggatteae 5040 geggteaatt teetettttt aaegttgagg ettttgeete teaaetgeea gaaeggatea 5100 cgaagcgcgg tggcatcttc tttcctatgt ggcagcgaga ggctctctgg attcagttca 5160 gtcacagegg gggcaatact cattatgcca ttegggtcaa categgecac atcaaegttg 5220 teagtggtet egatatetae gaggtetetg acaaacagga ttacetegte gteeceggee 5280 aacagtggct cgacggtatt gctgtaagcc ctggtgtcgt gcgccagttt gttgctatgc 5340 cttgtctgtc tcacccgtcc ttgcgtctgc attgctaata taggaggcag tgggctctgg 5400 atacaccgtc gagggccaag tcagcggcaa agagaaattt ggcggaatcc agatcgaggt 5460 cgttccttct tatgaacgag acactcacac gttcagatgc tcaaccgagc aaggacgcgt 5520 caagtatgcg gccgagcatg atacccctgg cgactatgcg ctgaaaagacg gcgacaaagt 5580 gtccatggcg ctaaagccat ctacatatag agggcaggct agactttgtg atttccttga 5640 cgatggcgaa agttttgaag aaaccgagaa cctctgcctg aaggtctggc cccaagatga 5700 gccatatcat gaggctgata ctgaaagaag cagagtgttt acaccatgcc agctatcctg 5760 geggecacaa getecaatee agtteeetea aaaggeatgg teagatteag gggtteageg 5820 aggagaaaca gaaatccggg cttggtggct ttggtacgtc gatttttcag tttacagttt 5880 gctcgtatta actcatataa ctcaggatct ggcgtttcaa gcgtactggg gaaat

<210> 3197

<211> 1245 <212> DNA

<213> Aspergillus nidulans

<400> 3197

cacacatcaa tttcacagtc taagaagtgg gtcgacattc acttacgtct ccaatgatat 60 ctacgccgca tccagcgcaa gtagaccttt agttatcttt attcacggct ttcctgacag 120 ctggggagta tggcgccata tcctcagcga gtaatccctg caaagttcag cgacgctggt 180 cgcggttgat ctgcctggtt atggaggctc tgagagctta gatagatatt cggctgccgc 240 cgttcttgag atccttaccg agttcatcat tgctatgaga aagaagtatg gtattgatgg 300 tcctatagct actcgtcagc agaggaccat tatcatcggg catgactggg actgtgtact 360 tgctatgcga ctggcagctg atgctctca actagctgat aggttcatcc tgacaaacgg 420

gccgctagta cgtgttatcc accaacatca cccagtcgct aggctcgact gacacatgtc 480 cctagatccc cctggcagtt tctaacatca gtatacggct gtcatcctta gtgtacatgc 540 tcaggtgctt cctgctctca cccgttcgag agcggtcatt attgttcaat gccgccaagt 600 cactaaagcc catattattt caattgtggc gttcgggata catattcgcc tttcaacttc 660 ctccgctatt gattgcctac attggcaatg gagcaaatca agcaacccta aagcacattc 720 ataaaatgtc gtacggcaac cggaactaca ctcctactga cgccgcagag tgcatggcaa qcacacitqq tccatctatt cacqaacqca tqacacaaac cqctqatqqc caqqcatatq cggaatccgc ggtgaccaga ccggcgatct caaagttcgt cgaaatgtgc agctactacc gagacggcac tgctaccgcc ccctggaaga agtctactga gacggtaaca agcctctgtg gcattgcgga agagaacgga gctcggtgca tcgatagtga cgcgagaata ctcgacgacg 1020 gaccgccagg cgccttgaaa gccagtacga cccgtggtct ggggccagaa ggaccatgca 1080 ctacteggag etgtgeetag atggtatete ggaetatett ettagegagt eagggttgtg 1140 agcttcaatc agtgcacact ggacgccgag gagctcaggg tccggttgct ttggtcaagt 1200 gccccatggg ctgtgaccgc cagcgtgaga catggaacgg gtgtg 1245

<210> 3198 <211> 1954 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> . 3198

tttggcaggc aacacccccg tgtataagga gaagttgctt cacatagcta ttggctgctt 60 tagegtgatg acctegaget ceaeggatgt etteegaaag etgttteaat ttgegteete gggtgtcgac ttcccgtatc ctttgtactg gattgtcgat gcggtcgacq aqtcaqaatc 180 ggcaaagact gtgcttgagt acatatccag aatacggctg gtcatccctt ccctaaaagt 240 attgttcact agcagggagt ctgtcatctt cccggccgac cagaaaattg cgactttctc 300 cgcgtcagca gagggcaaag gatctgttgg cgataattct ttggacatta gaatctatct 360 tgagcggatg atgcatgaaa tgggtggtaa acaagagttg aaagacactg tgatgcaggc 420 aattetgege egggeacaag ggaattttet ttgggteegg ttggttgtaa aagaaateet 480 cagttgccat acagaggaag ggatcgagac ggccttgcaa agcatgccca aagatatgaa

tcaattgtac gaacgcatgg agtgggtggt tttatcagca ccccgtgctg aagacaagga 600 gategeteag atgateette gatgggttgt ttgeteegt ttteeeatga etacegaagt 660 tttgaaccag gccttgaaca agaaattcat cgatctgcgg aaaacgatct cccaaqtctq 720 tggacagttt gtcatggtcg acceetetgg teaagteagg ettataeatg aaactgeteg 780 ggaatacttg acaagaacta cggcgagtcc cattgcaata cgactaccaa aaagccatta 840 ctcgctcttc gagcaaacat tatcggcatt gcttgcccct gacatccgcc aqaaqgtcat 900 cagagegeaa gagteeattt cagtategga geeetttetg ttgtatgeaq eeacqteqtq 960 gatgtatcat cgcagcagtc agccgaaata agcgaccaaa ccatnaccat ctatctcaat 1020 tetttagaac gacetetgtg etegatggat ceattactgt caattacega eeagetggat 1080 cggttggtca ggcccccaca ttgtgacgga ctccattaaa gcttatcgca agtcaaacat 1140 gacaaaaaaa tccattgttg cacaaattat cgaatctgga gcttcttgaa agatggtctg 1200 cagatetett agagattgtg gggaagttea geeggeagtt gaagatatae eetgeageea 1260 tatatagcca gattccgcct ctatgccctt ccagctctgt catttacgaa caattctacc 1320 aacaagactt cgcaaatatt aaaatcatgg gaatctcgca aacggattgg aatgacaatc 1380 ttgctcggat tccactaccc cgtggggagg aaggcatcaa actatgttgt ttcggacggt 1440 atgttgctgt gctgaccagc tctggcaggg taacaatctg ggacgcgaac cacttcaagc 1500 aagtctgttc tcttgtacac caagaggctg tcacttcgat gtctttcaac cggtacggca 1560 cagaaatgct caccttcggc ctagtaacat ccaggctgtg gtctgttccc tcaggggagc 1620 tgttggccac tgtagttaat cctgctaata ccagagcatt gtctgtcaat tcagagagac 1680 cgataggagt gtccttgttg cctgcacaaa tcgagttata tattctctgg accttgaaqa 1740 cctcgctgct ggttggcgta tgcttagtcg aagcttactc cacgagcgat cagaggtggg 1800 tggagctatc gtcaactcac cgaggtgtgt atcattcaac ggagatgcga gtcaggttgg 1860 agtttegtae eggggtttte cactateggt gtgggatete aatgagatge ggtgtatege 1920 caggtgtagg agaccgacgc gcaaaccaag taag 1954

<sup>&</sup>lt;210> 3199

<sup>&</sup>lt;211> 1688

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

<223> unsure at all n locations <400> 3199

gaaagattga ttggtgagaa cgtcctcatc caatgtccat gttcaaacac gcgggttttg gacatggcgt tgtttttacc acctgagcta gccggcatat cttgaccagt ttcgcatgac cggcgttgct ccttgctact atgattgttt ttaggcgtgt cacgatccac tgtcaagcgt 180 cgagggttat cttcgtagag gcacgctgac gtcaaatcca gggctctgca ttgaccacag gacggcctgg accggtcgca ttttacctta cggcgacggc attcagtgca gttgtaagat 300 ggacgcaggc gcttgcgagt cgtttgcggt gagtctgtca tcgtcgatgg cgcgacgaag 360 ttgtcaactc gggtgttgag agggatgaat ggcccggctc ggccgtagag aagaacgggg 420 ccgatatgcc cgagctgcct gaggccacaa ctgtaggcaa caaccatgat gggagtacta 480 ggtnnnntgc agcggaaaga agggataagc agacataagg gcgctcctcg ccactatgca 540 agacctggca gcatcaaagc gggctggcta ctacaagacc gcaccccttc ccaaaaacca 600 ttccctcatc ttctcaaccc ctaaacttgt aaccagcagc atccgtccaa gggcatccac atcaacgggc aatgcctcgc taagcacttt gcccaaatcc ccattacgta caataaagtg 720 tttctttccc gtccaggcct ctgcgaattc tgccgcggag gccgcattcc acaagtaaqc 780 agatgcgtac catgaatgca gcagaccgag ttttccgtca catctcatat ccttgtcccc gcggaccaat cgcaggatct gaataaagta gaatgtgaag agaatggtgc gccgagcgga ctcctcaaag atccagaggg tccagaaggg tgcgggcgaa gtcaccgtcg gcgggagtat 960 ggacgggcta gggttggaat ctgggccgtc tgtgtccaag ccttggtcaa gggaggggg 1020 gaaatgcgtg ctgttgaaga agaaagaccc tgctgcttgt agggctgata tgctgagggt 1080 gtcaagagac gaagcctgtt taacaacgcg gaggaccgcc gtcaaaaagg gcatttatct 1140 gaaacaaaaa cagggcctgc ctatgtgcca agaggccttg cggctggcaa ggaaccagta 1200 gagaacaagt teeegatgee geaagtgaat gteeeeega teatgggeee gagataaggt 1260 cttgggatgt aaaggcccgc aggcgaggcc ccaaatttcc atagcaggtc acaatttcaa 1320 agaaagagga ggccttcctt gaccttggaa tccttgacac catggcggtg taacagccat 1380 agacttgtac catttcccgg gtaccttggg agtcagggtt ctggtccctc ccccttttat 1440 agcgaaaaat taatgggccc tcttgcctcc ttttatggaa caacgtacct aatcgttatt 1500

tctcagcaac	aattctctga	ccacatcact	tcatacctta	tcttgatacc	acacaatcac	1560
atcataaccc	ctcaaaacac	tctaggctgt	tactaatccc	tcactatcaa	ttcctactac	1620
caacccaccc	ccgacgcgcc	cactatctca	ctatgatttc	tcttccatat	tatctatcct	1680
tctccaaa						1688
<210> <211> <212> <213>	3200 742 DNA Aspergillus	s nidulans				
tcaatacaag		tccccatgat	catatgctga	agagtatggc	aatgcatcat	60
				catcctgatg		120
• •						
ggcaacctcc	ctgctatacc	catatagcac	tgttgtatcc	cgcagaacag	gctgtgtctc	180
ctgcaggcgc	ttctcatttt	ccgcagcatt	gtactcgccg	tcgccgccgc	caatatcata	240
aaagtgtctg	ccatggccgt	gaaacgggtg	agtctctacg	ccgcggttcc	gaacggtact	300
gttaccaaca	gcaccacgat	tctgccagac	aatctcaagg	acctctccca	gctgagcggg	360
aaagatacgg	taatccttat	cgaagttgtt	acccgcagat	attgcctttt	gcaatgattc	420
cgtaacgtta	agctcacccc	tttgaatttg	cacaagatat	ggcgtttctg	ggaacgtctc	480
aacccagtca	tacccgctct	gtaaccagag	aacgtggtca	ctaaagttct	gatgaacatc	540
tataacaatg	cgacgcgtta	cactatctga	tgtaaggaaa	tctggatctc	gctcaagggg	600
ctgtaattgg	tagtccagcc	acccgtaagc	tatactaggg	accggcatca	gtggtgtagc	660
tgacacattt	gtcaaacatg	cgggagccgt	agatgggtac	tgaaggatag	cgtatggtcg	720
cagagtcctg	ggccttgcag	gg .				742
<210> <211> <212> <213>	3201 957 DNA Aspergillus	s nidulans				
						<b></b>
ccccgccact	aaaaaccccg	gtggttttga	gcggtggggt	attgctcccc	gcccaacaca	60
tgcagcatgg	gcgacgcaca	gtccacaagc	ctcatatact	cgcgcggacc	accgagcatt	120

ctctgggtta	tgactgggga	aagtcggaac	gaattcccgg	atgatgaagt	ccgattagag	180
acaccccagg	ttggggaccg	gcttcctgct	ggcgggagca	gcacctgact	cgaacggacc	240
gtttctattt	ctccgcgatt	ggcctaacgg	gacctatctg	ggaagatatt	gtgaaacaat	300
ccacgatcat	tgttaccgga	cgcagccttc	ctaatcctga	agatgccaag	cagtaagctc	360
gcctgtcaca	taccaagtgc	cccaataagg	cgttgtgaaa	ggatgtcact	gacgattcgc	420
gcagtatcaa	gtttatacac	ttcttctctg	ctgggctaga	caaggttatc	cacgatccgg	480
tgctcactga	ttccgagatt	ccggtaacaa	caagctcggg	aatccacggc	cccccatcg	540
cggaatggac	ggtgatgaac	tggctcgtcg	catcgcgcga	atacagtatc	acatacgaaa	600
atcagaagaa	acacatctgg	ggctcagttg	atctgtactc	gcacaggatc	caacatcatg	660
ttgggaagaa	aggtggtatc	cttggctatg	gaagcattgg	acgacaaagt	atgcgctttt	720
ctatatctcc	taacgtgcac	agacaaatca	aaattctgga	ggaaccttct	tgaaaaattg	780
cccgggtttc	cgtaatctct	aggccccaac	gttttaccct	acacagtctg	tccaaaaaca	840
actactcata	ttccgcggga	accggacttc	attattccgg	gacccgggaa	tgcacggacg	900
ctccaaattc	cggcacaatg	gacttttaag	cttttggaaa	gtttttcatt	gggttca	957
<210> <211> <212> <213>	3202 527 DNA Aspergillus	s nidulans		· .		
<400>	3202			·		
gtacttacca	gcttccttcc	tecgeetege	atgggggttt	tcacggcagc	aaataataat	. 60
ggcgttgaca	gcaataagaa	tggcaagaat	accagtcaat	gctgactgaa	caacgatcaa	120
gacaacacca	gtgactgtct	tggtcgtctg	ggagagtcca	agctggtcga	caaaaaccaa	180
cacgcaaacg	acagacaaaa	cccgcactac	ctgaatagta	atgttgatcc	attgagttga	240
cttggcaaca	tacggccggt	gccaaagcag	gagacccaac	attagcgctt	caacaacaag	300
ttgcccagtt	gactggacca	gtccatgccc	atttgcacca	gcaattatac	agcctttgat	360
aagcatatac	aggatggcgg	gaatgaaaag	ccaccaacag	cctttcttat	agttatcata	420
aaaaaaaata						
aaaaaggccg	tacttccgcc	aaacctcttt	gttctcgtat	aacggtgatg	cgtcgcctcc	480

527

agcctttttg tacttgcgag ctagatgtac gatgcgatag gcgaaga

<210> 3203 <211> 2325 <212> DNA <213> Aspergillus nidulans <400> 3203

cagggettac eggttaaage egttacecca egegattgtg tetteaateg teaeggeaga tttgaattcc ctgcttgtgt tagcggagat acggggatgg actgggttta cggcatacca aaggtccaat ccatcgtcga cgttattcca cagccgtgca ccgcggagga tgttgccctc 180 gcctgacccc tecttgcacg egaatecate ggegeteteg cegttettte gegggteacg 240 300 gttcccatat gagtcgagat acaggacgac gttgtttgac gactcgccct gaagctggaa gcctgtacca atcagtacgt gaggctataa acaggagtgt acggacctgt ttcgtagttg 360 ttccgtgtag tgatgcgctc gtagtgattg ttcgacgcat cgcgcgcata gacaccatac 420 ggtccgttga tcagttcgag gtcgtagaac tcccagtatt ctgcatcctg gatatggagg 480 atacctcgat ccgcattgtc gagcgacgca tctaggtcgg cgggggtcct gaattgatca 540 gcagcgctcc attatctagg tctctgtact caccctggta gctcttcgcc gtcgataatt 600 accgactete etteatacge geggagaacg tatggtgeeg aggeegtgee gettttggtg 660 atctggatat tacttgtcgg ggtgtatgtt ccgccgcgca agtaaatcgt agatcccgca 720 gtagcttggt cgacagctag ctggatggac tggagcggtg catcgatcgt accggcagca 780 840 tegteegage cateaggtga aacatatatg teegeegeaa gaactgeggg aaacaaageg gcaaagaccc agaccgattt ccccatcatg atgcgatgga cctgtgggct tgaggacttg 900 ttttgggatg agtccgatac ttatgcctga aaagacacac ggcattgtct cccattgttg ggaaaatcag cttgattacg cgggatattc gtgctcggcc aagcctgcaa gggccgccag 1020 cgtttcattt tgatttaggc tcgcacgtca atcatcatct tggctcactg tgaagaatta 1080 aggccccgac cctgtttctc atactccccc agcgctcgcg caagcagctc agggtaccat 1140 ctccggccga catcctggtg actgatgatc cggtggatga gcgttccttc gccagtgcgg 1200 ccgcgaaata tcttattaaa ggtagcctca gcatccgacc gtgccttctc atcgccagcc 1260 aacatcttga tatggtccgg aaactccaac gagatatcct cagccgacag atccagactc 1320 atcccctgaa agaccggtat tgagaaccgg ggccccagcg gtgtcccctc cgcatcgaca 1380

taattcgatg gtgcaagact cactcggtgt gtcgttgccg tacacacacc accggtgatt 1440 gettteaaag egeeceegat aataaegaee ategaeeeet tgattggtgg ageegagate 1500 caaaccccgg atttattctg cacttcgagt ccgtgatgcg gagtagcttg caggaggaat 1560 gtcaagaact ccgagtcttt atgggtccaa caccttggga ttcggcgtcg ctgggtggcg 1620 gagggtattt gattagtttc atcttctgct gcaccggctt atcaaagaat tgtttcagcg 1680 cgtttggggg cagatccagg gcctcggcga tgaggacctg gaaattctcc gccaccgggc 1740 tcagttccgc caggtatgct tcgacggatt ggcggaagcc tgggattgca ttctcatcgg 1800 gccactaatt aagatcagat taaggccaaa gtataatgcg gggtgggaat ccagtacctg 1860 gttggggccc ctaatgttcc tatatagggg ctcgtccggt gcaggagcag gtaactccgt 1920 cgcaaactat atcgcaatca gtatatcgcc tgattttgga tcttatacgg ggagatcttg 1980 tggatatgcg cacatcgaac tgttctcggt agtcctgctt ccgtgcagtg atttcggccc 2040 caagtcgaga gtagccgaga aagtgcttgc tgttaaccat ttcgatctcg agcttcttct 2100 ccagaggaag gtcaaagatt gccctgcact ttttcacgag gtcttgtctg atttgcggtt 2160 tgatgggagc gttcacgaga taaaagaacc ccacgttgac catcgcgtag cggaggtcgg 2220 tcaggaaggc tgatttgctg gacatcgaca gtgaatagtc caggacaggg atcaccgaga 2280 aggaatcgga ttggttggtc attttggcca tattgatgat aattt 2325

<210> 3204 <211> 2120

<212> DNA

<213> Aspergillus nidulans

<400> 3204

atgagagttt taggtgggtt atttgtggct tegggagttg aggtagaggt tteategtea 60
aggateaggg agteeeggag aagaagttte ttetteett teeteeteget gttttggeta 120
gaaggggatg gggatgatat gggateatea tgeageeata teeteattett teeeteece 180
aaatgaaagt eeeagtttte geegegegag gtgeggeeet gegttaeeea gteeagaaeg 240
cagagaetae ttegggagga geeettgget gtaetatega egatgaaggt ttggaeetge 300
tegtaaegae tgtetttgaa tggeaeegaa ggategggaa gataaeaeaa tgeggettet 360
tgteegatge gaaeetetaa agtetgaega etttgatetg aaagegtgeg eteeggggat 420

gcttctgtct tgaagatctt tgtgctgccc tgtggcgtcg tgacgacgag cctagtacgc 480 ggctcaaggg ttatcgagac gtcaatctgg tcacccggga ggagacctcc tccgtatgta 540 600 agaaggtaga ggtggacagg ttgaaaggcg gagggtaatg tagactgcgg cacgaaaccc 660 ccggtgcgcg tgaggagctt gagcgggtat ttgtaggtca gcgtgctgag ggagggattc gcagggggta gcagtgagag gacgactttt ccctgcccgg gcttcgcaat cgaggactca 720 aagggcgatt tgactggcat tttggttgtt tatcgggaga aatctttagg ggaggatgcg tagtgtcgga ggagggaagg acttggagtt cagtagcttt ggttttgatg gcatgacgcc acttatcaga atggcgcggg cgtcaatgtt ggtacagatg ccagatgaca gtgtctcaag 900 gtcggtctgc ttggctgggg aggggaatat ctgctgccga tgaagtcgct cctgtccaac 960 cgtagctcaa gactgcggag aagagctcca aacggagttt ctatgacaag atgcaaacta 1020 ggcacctagc attgagcgtc ttggctatta atctatgccg ttacacaacc tcaaagtccg 1080 tctgtgatgg agcagtagat ggtttccatt acggcatcag caccgccctc tcctcttccc 1140 cgccgcagag gcgccgatcg ctagggttaa tgcatcatgt aattgcataa gtccccttac 1200 taattttatg actttatggt gagcacgtat caggcagtac taggcatcaa agcgcgtctg 1260 ctccgtccag ttgctcgcag gtctctagtc aactccgcgt cctgcactcc tcccttactc 1320 ctccatcgtc aagtcccatc cgacatagcg gaattctcgt ccattgggtt tcggtcctca 1380 ctgccacttg taacactttc tacgcccctt cgactggtag agacaacgcg cgcacagaac 1440 catttcatcc gtcgtcgcgt ttgccgttca gccccaacaa ccccgcgtgc aagtacgatc 1500 ttcgcccacc atccgtcaat gtgtgtggca taaaccgccg ggatctgtat ttgtcgctat 1560 tgagctatcc tcacaattcc tgcaaggaaa atggagcccg agttacgctt ctactcgccc 1620 caacctggat tgacccagga taccgcagta cccttaaaag acaggccaaa atctggtcga 1680 gggacgcggc gacctggatt attcttacaa acctatagtg atgccaatgg tgcgaccgca 1740 agcggtggca acgaaaggga accactcccg gggacagacg aggagaggtg aaggactgca 1800 acgttgaaag gtcggagaag agtgggtcgc acacctaggg gggggatctt gggaagaaga 1860 cgggctgact aggcaaggta agaaagccca atggggaaaa agacgcaaaa tctggggtcc 1920 aatgcggaaa tccaagttac gaacggttgt aaaaatgctt ctcgagcgaa agggcaaatt 1980 tegtetteea aaacaaggee ggteaacttg caagtgegge ttggttatte ggttecaaag 2040

gttaagttct	tcctctcctc	ctggggagga	ggtccccaaa	atttggtgtc	acaaacctgc	2100
cccaacgcca	aattgttgat		•			2120
<210> <211> <212> <213>	3205 4213 DNA Aspergillu	s nidulans				
<223> <400>	unsure at a	all n locat:	ions			
cggatgccct	gaattgcaag	ctttcttcag	ccgaatgcac	ctggtacagg	accgtttccg	60
tccggtcgtc	tggctcgcat	ctgagaccct	accaggacac	gtccgcaggt	gtcgcttgag	120
cacgtcggtc	cgctggaagc	tactgtcgca	gctggcgcac	gggtgtggcc	ggtctgcggt	180
atgcgtgcca	ttgtggcgct	ggagatgctc	tctgcgtcta	taccgcttta	aacagatccg	240
gcattgatac	tgtccagggt	ccatttggtc	catttcgcta	gaattcgtgt	gctgaggtca	300
tgagatggtc	cgttcgtggt	ggttaagatc	tggggaaagt	gagtgatgac	atcgtcaacg	360
cgccgcgcca	ggcaagtctg	gagaagcagc	acagcacggg	ggtgcggggt	actgagctca	420
gggctgggct	ctggtttggc	gaatgagatt	gagcgcagcg	caagagattt	tcaagcctcg	480
ttccaataaa	aagagttggt	tctggccacc	gtttggccac	tagtnggcgt	ctgttatact	540
ccacttcact	ttcttccggg	gactcgcggg	tttctactac	gcaccccatt	ctatgaactg	600
aattactgta	gaaattggta	ctcggggaat	cacggaaaat	acctggcaat	caggtacata	660
aggaggcaga	agataggctc	tggaggtaag	ttgtagacca	atttgacccg	atcaaccacg	720
tcgtcttcca	aagggttacc	ctaggataat	cgttgtattt	ctcgccaacc	atcatccttt	780
tgataattga	gagaatcggc	atttatattt	attattggac	ctgtatccac	tgctttccca	840
gcgcaatgca	gccttcttgg	ctgttaccgt	tcggtcttct	aattagggtt	gagcgcacag	900
aaggcaggtg	aaaaccataa	catggaaggt	tagaactagc	gaacccaaga	agcattcaaa	960
tgatttaccg	agaatacttt	ccgatttgga	tggcgaagcg	actatcccac	tccatatccg	1020
ccgtcctccc	acccccacta	tactccaccg	ttcctcggcg	ccctagcttc	tcccacacat	1080
cccgactctc	tatctctata	ccctcgacca	agtccagggc	tgaaacccct	gtcatctgga	1140
atattgaaca	ctaccgcacc	atggctactg	aaacatcacc	gcgagcgctg	gtctcgtacg	1200
acccacacaa	at.cgggcggg	tagaaactga	agaatgtcgc	actacqtccq	ctacacaaaa	1260

aggaactect egtegagatg gtegegteeg gaatetgeea gaeggatete eatttegegg 1320 ggatggagac cgggtatgga gtgcattacc caagggtaat gggtcatgaa ggtactggac 1380 tgccccgctg gtcattggcc gttctgctca cctatctaca ggcgccggat acgtgcgggc 1440 tgttggacca gatacaacag tcgccagagt cggcgatcca gtcatcctgt ctttctcggc 1500 ctgcaaggac tgtgagcctt gcaagggcgg ccatccggcc cattgctcca acttcaacgc 1560 tatcaacttt gaagctgteg eggaagatta egtetttege gaegeetett egeeagagee 1620 tgcttctggc ggtgatatct acggcagatt cttcgggcaa tccagcttcg ctagtctgtc 1680 aatcgtccag caagactcga ttgtcaatgt tgctggggtg gttaagagcc gacaggatct 1740 ggcattgctg tcaccgttgg gctgcgggat ccaaacgggc agcggcgcta ttatcaatgc 1800 ggctggtgca cgtcctgcag accgcgttgc tatcatgggc ctggggggtg tcgggttgag 1860 cgcggtcatg ggcgcgaaga ttgccggatg tacgcagatt atcggcattg accggcacgg 1920 atcgagactc gagctggcaa aggagctggg tgctacccac gtcgttcagg tcgccgaggg 1980 aatgccccta gacgaggtga ccgcggctgt gaaagctatt accggtggcc tgggctcgaa 2040 tatcaccete gacaccaceg gegtgeetge ettgategea gagggggtea agatgaegge 2100 attcaagggc aagatcetgc aggttgggac agcacccgag acagccacac tgtcgattcc 2160 tattcacgag ttcatggtgt ctgggaaaca gtttattgga gtcgtagagg gcgatgtcgt 2220 accgcaagag tatcttccaa agttgctcaa ctgggttaat gagggtaaac tgcctctgga 2280 teggategte aaattetace aggeegagge etttgagaeg getateegtg atatgeagte 2340 cggggtgacg gttaagccgg ttattttatg gtgagggggc agtgctggta tcggtggact 2400 cggtgattag gtacggaatc atatatccca actagtcctt cgaagcagcc tttaaaatcc 2460 attccctgca cctttaagcg cagaggtata gagggcgggc ctctagtcaa ggttaagatg 2520 atcaacttgg tctcaagggg tatatggccc tagttgtctt tcaaccacct cagcccacag 2580 gtcttgaatc gccttccaac gcccgtctcg ctggaaactc tgttcctctg tccagtatga 2640 gtagactctg ttagttaatt cccattgctc gttatcctct ggagaagggt ctgcgcgaag 2700 atactcaagt aggtgggcaa ggccatccca ttcaatgtac gcctggaaca gccacagcca 2760 ctgcttgccc tctgcgtaac cccgtagtgc ctctgcatcc tgcaaaatct gagcccagtt 2820 tctggctgaa cgtgcactgg ctcgtccttt cgaggcggtg ctcttctcag cctccgcgcc 2880

tgccgctacc acaagccgaa gcttagcgag gataagcctg atagactgca cggtcaccct 2940 atccagegga acaetettat cacaaacece caaatactge tttcaateet etectaaaca 3000 gttctattgc atggcgcctc tcgtcgacga taatcgggcg tacgaatttt ctgcgcggaa 3060 cctctcgaaa ataccatctg ccgtgcaaag taactgcctt cgaagcgcac tagactgaac 3120 agcatttccg ttcgaccctg tccacgcggc ggtctactca tggcgggatg catggtcgta 3180 tctgccacgt tggatggtag gcgggtgttg aatgaagatt ccagtatgca cggctctgag 3240 cccctatcct ctgcgactcg gatatctaga gtaaagagct gccaccacac ccgacggcgt 3300 atctcaacct caaatggcgg gtacccctgc gcttcagcgt cctggttgag gcccattttg 3360 agggctattc cagtggcgag gccgacgagg gcgtagacgt cgggcccgtc tgggtcgttt 3420 egggeggtta tetggetatt agegaeaace aggageggge teaegtggtt ettaeaaggt 3480 atatagtaaa ggcctgtagg acagtcatat ctgtcgagtt caacaagttt agtcgcgaga 3540 gcatgttttc aattgcggtt cggtatctga gcagcgtaga ctgcgttagc aatacctagg 3600 agttattcaa gcgcggcttg atagggccca tgtataccgt cttagcaaga tttttcgatc 3660 ctcctggagc tcagttttac agaccgacag ggtcatggct gccacagtcg cataataaat 3720 cgcaaacagc aggcactccg atgctaggtc caacttgtcg cgactccgaa tttcctgaaa 3780 gactaacatc tgcacagtcg gtgtgtgaaa tattttcagc agggggtcta cgatctccag 3840 gtacctctgc cagaggcccg cgattgtgct tggtgttggg cgaaataggc cgagatcgac 3900 agcagcctgg ggctgcagga gcattgatga ccgagtgcca gcagtatcag ctagagagga 3960 gettggeaga aeggaeattg etcegtetee etgtaeeetg ageaetetga etteaetata 4020 ttcagtgtct tgaaatcgat tactgcctcc atatcgtgct gacagcttcg agccagacgc 4080 cgatcgcgac agcgacggct cctcgacttc ggctaggcgc ttctcaagag ctactatctt 4140 ggactegagt gatgegacae gactaagege ategtagttt teaceagetg eggegegaeg 4200 caggatattt gca 4213

<210> 3206 <211> 2459 <212> DNA <213> Aspergillus nidulans

<400> 3206

ctatgcatgg caaaaggacg ggagcattgg aggccataga tagtaaaaga gcgtgatcca taaactctat cccgcgttgc tatagactta gcgacggagt tgtaccttgt gcttgtgccc tagtaattcc ggcggtcacg gcacggcatg aaggagtata aagatctctc ttattcgcqc 180 tttgtagaat ttcatcttat gtctcttaac atcccaattc aaagctgaac cagccacttc caaaatgaag atcagctgaa catgcgtcgc cagctgcctc cttgccctcc ttcccctcc agcgtcttag ctataccagc ctctccagca gacctgaact cccgcgccat cacaacatgc 360 agagttgtca atacggagtc agaagtgaag tgccgcgcgg ggcctgattt tgactacgac gttcgaacat ccgtctaccc aaacggaata tacgacttca gctgttccga gggacccttt gtaagcctgt attcctcact tttacccgat gctgtattgt tcttgtcaac catatctagt 540 agggctggcg ccgctctttg ttgcgttgcg aacagttatc tgtggcgctt atcccaagat 600 tgtttcagaa ctttacaaca ggtatataga acgacttggt tcacgaactg tgagcatttt 660 ttaaaaaaaa aactcctcaa gcaatttatc gtatgtccaa attgtggtga agatgctctg 720 gactttttag tcttgtaact ttcgccccct aaaactatca atatacacaa aggattgaca 780 tagacgacag cgaaattgaa agagaagggt accttatcct tagcttcatt tcagaggaca 840 aaggacaaat catggatact ggctgggtat ttatagagta ggaacttagg acagtatctg 900 cggagcggcc cgcctattgt taataagaac gaggtaccgt ccgtccagag gattcagttt 960 cgaatcatgg aagagtatgt ttccagtcca tttatatgcc ttcaatcata gtcgccctat 1020 tctatgtgaa ttcaatggtc atccatcagg ctcactagac gtagcggaga gtactagcct 1080 cccctagccc taaatctcct aggctccgcc ggggcccaat attccttacc ttcttcaaat 1140 ttctacccaa gcagagtagt caccatgcaa cccaagacga gctgcaaatg catttccctt 1200 cgactcagct gatttcgtca tgcccgtgcc cggctttccc agcaaatcga acgcgtaaag 1260 ctcacgcatg ctcttgtaga atgatattcg tttagaaagt gatgatttag tccgtatgat 1320 attgtaatag aacaaaatga acatcattgc cggtagcatt gaaagaatac ccgctaattc 1380 gttccatcaa gagctttata aacctcagcc tcaacacctc cccaaagctg caacacattc 1440 agatecaeaa atggeagtat etgtgaacaa accatteetg ceaeteettt eteeeggtee 1500 gcccaccacc acaggitege cagiccagee caatgigeeg tegeagitga cegiceegie 1560 geacegeegt tactgageat aaacgteagt ecceatecet geggegggtt tecagggaca 1620

ggatacagtt cggggatcgg gttcgtcagg tcaggcttcg atgetgggat cggttgtcga 1680 ctgtagttgg gcatatgggg gatctgattg ctgaacatgg tctcaaccgt actggggaga 1740 aggaggggag ttcctgtaat agggtaggtt cctcattga gaagaacgga aagaattcct 1800 gtttacattt ctgtcaggcc gggttttccc agtagtcggg gaaaagactg aggcatactg 1860 cagtactcct gcggcttcgc aaacatccct gcgccgccgc tgttgaagag ccgtttcacc 1920 tcagcttcgt tgccgaggtt gacaacaagt ggtgctcgaa ggaggtggtc tcgaggccgg 1980 agagtgccgt cgtggtctcg gtggttcata tacgccagtt ttgaccgcat ctcctcggtt 2040 gggatcattg acatgtgct gattcccaac ggctggaaaa tatggcgctg gaggtactcg 2100 ttcagactca gaccggttgc ccgctccagt gcaatacctg cccagtcgat accgactat 2160 gtaggcatta gtacgtcaat atcagcaggc aagtaaggca tagcaagaga taccccatac 2220 tcccatccct ctcccggctg gaacagcaac ggtgcctga catcctcgat ccggccgga 2280 aactcgtcaa ggccggcgg gtaggaccac tctctcagtc tgtcgttgaa gaagctatac 2340 ccgaagcagc aaggcgagg tacttactga gtaggagta ataagaagct ctgtgtgat 2459

<210> 3207

<211> 579

<212> DNA

<213> Aspergillus nidulans

<400> 3207

agaatcacag tacctactga ataatgaatc atttgcagaa ttgtggcgag acactgcacc 60 gagctgggcg tgtgggtccg atggcccggg agacctccgg gggatcggac caaagcgact ccacgtccta tgctggggaa taggccatgt gccataaatg gagtattggc tctatggagt 180 ggattgcagt gtaatgatct atcaagtcag tttttagact cgctgccact gtcaccaaaa 240 300 tgtccgccca gctttctctc gtccacggcc caaaagagcc tcccctctgg ctcgataaga cattatgcaa cgtaatcgac cagcaagagg catcataccc cgaccggacg gcacttattg ttccatggca atcgacacgg ctctcgtatt accaactcgc cgagcgaagc gggttgtcgc 420 aaaggcgctg cttagtgcgg gactgctcca cggcgaatgc atcgggatca tggacggaaa 480cagctacgag tatatcgaga tcttccttgg tgcggcacga attgggtgtc cggtggttgt 540

<210>	3208	
<211>	2183	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 3208

tttgagtcca agttacgtca ttagcctcag tagccgacag tacacgtgat caattgccga 60 tggctcgcgt ttctagacat tgaggattac ggagtagtct gaaacataga actgctggat 120 ctcgaaatgt caaagagagc aatcgcgtaa cgcagattcc ccgaacttgg tgacatgttg tgcgcggtaa ttccggcctt gtacaatgag gtagcttgca gtgctcggcc cgaggcatta ccgcattggt cgtggcaaca acatgattga tgaggggaca agaagaggta agtgaagcgg 300 tttgcaatat tgagtggctt ttttctaata ttccatcgca gacagtccgt cgactgatga tacaaagacc ggtcgatgcc tcagcatggt acaaggattt gaaaggcgag aagcatcgac agagctcgag tttacgatga cccaatccaa cgatggagag cgagcagagc tgctgagctg 480 agagggtcgg cagggtctgg ggaaggcacc gtgccataca taagtctaaa tttgcatgtg 540 aaagttgcat gtcattcgac acgactgacc tgctgaaagg ggattggaaa gaatcgtcca 600 gtcgaaactg aagagagcat gtgaagtctg atatccccag tgaatccaat ggtcgatcag 660 atactaagaa attgaggatc ccctgatggt tgactactga tggttatggg ggtggatgga 720 caaaccagca cacgggaaat ggcctttact aagagcagtc cactctcccc ggactctcag 780 tgagctttgt ccccatacta tgctccgcga aatacgggga agagccgtac actctaagaa 840 tggaattgta gaaccatcaa acgaatacaa aagtcagtaa atgatgatca gtaaataagt ctgattcgga tcgatttcat acctggtcca tattaactaa tcagaagtta actctgtaca tgccggtcgg actcagcagg ccgtaccgtg tggcagaccg tcagtgagcc tcggccgaaa 1020 agcgactttc tcccccgtcg gcttatgaac gagtcctgcc ttttaagacc gtctactttc 1080 ectecgeest gaattettee tecaegitee tgeetttete etttettet ettecatete 1140 attttcttcc aacttcatag ataaatcatg gcccccagag taatcgttgt cggtggtgga 1200 tgtgcgtcct cctttcatct tcatctccct ggtgtctccc cgcattagct gatcgtctct 1260 tgtccttcag tgtccggtct cagtgccgcc cacaccgtct acctcaacgg tggaagtgtt 1320

ctcgttcttg acaagcaagg tatgtcgcag ctgttgctgc tgtcactacg ctctgttatc 1380 atttccccgg gcgaaagctg cagtcgtcga ggcaatacgc agtccatgac cagccgaggc 1440 taacattcac cagcattctt tggtggcaac tcaacaaagg ccacgtccgg tatcaacggt 1500 geteteaete geaeceaggt egaeeteaat ateegagaea gtgteaagea attetaegat 1560 gacacattga aatccgcccg tgataaggct cgccctgatc tcatcaaagt cctcacatac 1620 aagteegetg etgeegtaga gtggetgeaa gatgtettea aeetegaeet tacaetggtt 1680 tetegtettg ggtaagtega tietggagte tatteggiee ageattgiee gittgetgae 1740 tgtcctagtg gccactcgca gccccgaacc caccgtggtc acgatgccaa attccctggt 1800 atggccatca catatgctct catgcagcgc ctagaggagc tctccgagtc ggaccccgac 1860 cgcgttcaga ttatcaagaa ggctcgtgtt acggctgtca acaaggacgg caatgctgtc 1920 actggtgtca catttgaggt ggacggtgag acgaagacgg ccgatggtgt tgtcatcctg 1980 gctactggtg gttatgctgc tgatttcggt gactcgtcgc tccttaagaa gcaccgcccc 2040 gacacgtttg gtctggccag caccaacggt actcacgcca ctggtgacgg ccagaagatg 2100 ttgatgtcca tcggcgccca cggtattgat atggacaaag ttcaagtcca ccccaccggt 2160 2183 cttgtcgacc caaagacccc act

<210> 3209 <211> 1247 <212> DNA

<213> Aspergillus nidulans

<400> 3209

aaacataaaa agtataaata taaaatttat aacaatatat ttttaatata agtataacaa 60 agtaaactaa attatttat aaaatagtaa aatggaaagg gaggggggg ggggggaaaa 120 aactaaaatc tccacttaaa tggataaggg taaaccgaat gaaagaatat ttataacaaa 180 gggtaacact caaggggggg acaatggcac atgggagcga aaaatgaagg gggctatacc 240 acaaaggtaa tattagaagg aggggactc aaaatatgaa agggacagcc caagggtgta 300 acaacgtaaa ggggtcacaa agaaaaatat gagacggaca cattagataa gaggacaaaa 360 tgaggaataa gagtatctag tatgaagga tgaatagtaa ctcccaaagg gtggaatatc 420 tatctaaacg gagcaagggc cataaggaca agaaagggg aaccatcgca atccaggag 480

ggaatgcaaac aggcctcgtg cattaagaag agtccagcgg aatcaatcac catgcaaggg 540 ggggcaaacc ctgtacaggc tgccatacgg aggggataag caggagcctg cgtacgcgca 600 tgggactgga ttgggagtcg tgcacacttc agcaatattg tgggattggg gctaaggatg 660 aagcagggag ccaagcgctg cgatcgtggt acatcgacag ggcaagtccc tggttctctc 720 ccgacagaggg taggcatgag ccccgccgag tccaccgtcg acccccggga gctcctctgg 780 ggtatccttt ccaccctct ccgcatccgt ggctcccagt cgtacctctt cccatctctc 840 cttgagcgct gcaaaggcac cctcggcttt gattccccga cgccgctttc tatcagtgac 900 ttccaccaga ttaatcctcc gcttctcaat tccgctagct cttcttcaat tgcttctgaa 960 actttagata tctctggacc atggcccgcg gctgatgaca atactatgga ttctagcaca 1020 ggcagcagga caacaaattc gtgtgcatgg gaaataactt ctggtgatac gaacgaccag 1080 aaccagacta gtgatcagc gccttcattg tctggatcat cgttctaagc tgggaggtta 1200 ttgacttgac ttctggactg gctccaccac caccactacc tcctcct tcctcct 1247

<210> 3210 <211> 2437

<212> DNA

<213> Aspergillus nidulans

<400> 3210

atcttcgtag gccgctggca ggtaaaaacg ggcacgatac ttagaaagct ggcaagctgg 60 cgggtttttt cggcgaccct aataatggat atctaatcca ggagaaatct ataatacatg ttgtacaggt gacatatcca agaataatat acagtgagtc agctctgaaa ccaaaqtcct 180 ggttttggag ttaaccatct tgttgtacaa gtctattgtc taacggcgca aagtcagttg 240 ttggcagett teegegetgg etegteetea ttgegaaceg ttggateata tteageagae 300 tettteettt caggegtgge gteaceegat gtaggetett eetetaaege ateaegagee 360 ggtggatcat gctcagctga tccttcgcta tttagtgtgg tgtcacttgt ttcttgctgt 420 tggtcttgat agtcattgtt ggcggggttg tctgtctcag cggcgtcctt gctctcgcqc 480 gtcccgccat tcagtgttga ctcggcctcg aaatcgtttt cgtcagtggt gatatctgtc 540 trageggegt cetegttgte ggatgegtte atggtategg gggagtattg tteetetgat

tctgacaggt caaggtctgc gtctccattg gctttcaaga actcctgctg tagacggagc tgcttctgca ttgcgatctg gcgatgcaga gaagcgttct tccggagctt cttgttggca gagaattctg tcaatgctct gaccattctt tcttccacga gttctttcac gtgcacagcc 780 agagtgeggt etgtaaagat geeteegaae egataaetga geeaagtgta gagaataaea 840 gateggtgea ggeetteaag ettatgeata tacteettgt tteeagatae aggttetteg 900 aggatttcga gattgacttc ctcaatatcc aagagccggc cgttcgtgtg ttcgagaacq 960 cagegetega atgecatege tactetgegt eegagetett etegtgggtt eatgggegeg 1020 gccataaagg ttagctggtc cacaaaatgc aggccaggta cggcatcaat gatctccgca 1080 ttttccaggt ttgggctggg gtcgcacatg aagaacaagt tattgattct ggcaatctcc 1140 gttaaccgct tgaccatgta cgcgagtgat gcgttgctag gaaaataggc tgcgaatttc 1200 tcataaacag agtcgggagg attaatgcct gctgcactaa ttggtggtgg ctcagtgttc 1260 agggcttctt ggatgtaagg aaggtcgact tcttcaagtg aggtaacgta accgacattg 1320 tcattgtcat tgtcctgctg atggtctttt ccgtgctgcg ctgctgagcg atagcggcca 1380 gcgcgtccac cgatttgttt aatctcgggg acggtgagtc ttttaagtcc tgaagggaga 1440 gtcttcacaa cagtctcaaa aatgatccgt cggcagctcc tacaaattgt tagattatac 1500 gccgattcca ctagatagac gaaactcaca gattcagacc catgccaatg gcatcgctgg 1560 caaccaagaa gtcataatca ttattggggt cattgaacag gcttgcctgc tgggtgcgga 1620 tttcagcggg caatccgccg tagataatag cagccgtcgg cctgttttcc tttcgatatc 1680 ggctttcaat gcgtggatcc caactcggga gaatgagacg atgcagtccc ctctgtggag 1740 acgtgacgaa tctcctttca aactcttgtt catagccttc aaggggttca gccgttcata 1800 gcgatggatc acaagcttgt ctccagcaag agctgcaagc tgtcgaatca agggcaccac 1860 tctggtctct ccacaaaggt gaagctctgt agccttggca cctaacagtg cacgagtcca 1920 tgcccagccg cgcctcggat cggctatcat ttggatctcg tcgatcacac ctacttcgta 1980 tgtttgccct agattgacca tctccactgt attgctcacg actaccgctt tttcgccctc 2040 ggataatctc acttcatcgc ctgtaacaag actaactgga attccacttg atttgaatcg 2100 atgatagact tectgageaa ggageeteaa aggteetgea tagaaacege tttttgatga 2160 ctccagccgt tttagggcgt ggtatgtctt tcctgagttt gttggtccga cgtgtaaatg 2220

gattgtccgc	tgaatggccc	gcgcttgagg	gtaccactcg	gegggatace	gcaggtccgc	2280
gatcttctgc	tgctgttcca	agtagggctc	cgaataccgt	gcatccagat	cgtgcgcata	2340
caaaagattc	tccagttcac	gtctcagccc	tccaaggccg	tctttaagat	aagcctttgt	2400
cattgccgct	cgcgttgagc	aaagagccat	gtttagt			2437
<210> <211> <212> <213> <400>	3211 571 DNA Aspergillus	s nidulans		·		
ccaggtgtca	acggtcaatt	gccgatcagg	tacagaagac	tcgagcgcgc	aatggcgtag	60
agcatattca	gtcgccctca	tacggcggct	cctcctgata	cacatcatac	ttgtattggc	120
tgcctggatg	atcggacctc	agcccggcct	ggccgacccc	atagaccttc	tegegegetg	180
ttaaaccctc	ctgcggcgct	tcagagtaga	taccccgtcg	acgaagctct	ggtaccaaga	240
ggttcacgac	atcctcaaag	gttccgggcg	tggtaacata	cgcaatattg	aatccgtcta	300
ggtctgcctc	cctgacccaa	cgttccaact	catctgcgac	cttttcgggt	gttcctacac	360
taactggtcc	caagccgcca	atggcagctt	tctcggcgac	aacccgagga	gtccatcgtg	420
ggacatcttc	actcgtggta	gtaaagctgt	ggagggtgct	ggtgaccttg	tgggcctcta	480
gggagtcagc	agccgtgata	tcctggtcca	ggggcagtct	ggagacatca	atgcctgtcc	540
atccgctgaa	caagacgagt	cctccgatga	С			571
<210> <211> <212> <213>	3212 1095 DNA Aspergillus	s nidulans				
<223> <400>	unsure at a	all n locati	lons			
tgcatattat	agaggcatgc	ttggcctttc	ttggaccaca	tccggatatg	aactaaatac	60
ttttctctaa	tctgtgttct	gctagcaata	ttgcattgct	ttcaacatca	acttcacact	120
gcaactaagg	atgactacct	ggaaatctat	gcaaaactcc	ggaaactatt	ggccgtatat	180
agacgtactc	ggaaggcaca	tacggtcaag	agcccggagt	tccgggacgc	agggcccttt	240

ctttgagcat ctacgaggat ggcaccgact tcctggcgcg ctgtatattt gattattttg ttgagtgtat gacaggcagc atataaaaca cacttaactc tccaaggaag gttagcgctt teggetgagt gegaagetga caagttgtee geggtetgtg tatecaetta etegetttta 420 ctcgctttac ctgcccggtt gattgccaag gggtttgttt gatatgttcg ataacagtcg 480 accttggctt tgtcttggtt cgcattccac ccactcagct gaacaaaccc cgcagctgaa caatggtttg gagatatgag actgagttgc cggatgcaat acagtgcctt gtaggtttgg egeegeettt ceaacactet ggetetetet cagegeeaca ttegaaaget atteegtaat 660 ggacttagac gatgattttg gttttttacg agatatatca ttaatacatt tctgtaagaa 720 agetttacce ttattgtaga cetgetggge tetgtagagg acageteggg acagecetaa 780 atggttccga gatcgataaa aagcggaaga ccagctgttg aaaggcaaag gaaaaacaaa ggtctctcat tgcatggggg accaaccctc caatcaatat tgttatgccc tcccaagtac 900 caccacaatc cacgccgata ggggtgcact cgtggggtgg tacaacccgc aggtagaaat tgcccgccgg tttgcgttct agaaagtacc gaccgacgaa cttgattatt ttaaaagggn 1020 nncgggaaaa ataaaatcta ttttttntta aagtttcttt ttttatttat catgggaatt 1080 ttgatttgtt ttgga 1095 <210> 3213

<210> 3213 <211> 1993 <212> DNA <213> Aspergillus nidulans

<400> 3213

tecaagecea tagateteta ttateateat eateaatett acegttaage geacecegeg 60
acegeeceat gagettegtg eagaategge getateggee ageaagtttt ttttgatgte 120
atgaagtatt gtetagetgg egttgatgat gacagetagg tgacagette gtgacaggta 180
acaateatgg acatggacat geteteggtt eeetttgeaa eatttgtggt aateegttge 240
egtagecact tacateettt eeeetggagt atactgeaat teaagegetg gactgaaaga 300
ttacaggeae tatgtteeet ttteacatee atggeeaaca aattteteeg gtteacteaa 360
eeettetata aacetgetea acteggeeg etttegttgt ggeeeeeace gttgataace 420
eeataagace gtetgagttg eteeeaacat eeeateette eeeeageate tteetetgee 480

ggtgccacat acceggacet ceactattea ggtgcttgct ettggtcata ataaceegca 540 aatgttcagt ttatcacgac gtggctgtgg ttccaacacc atggttagcc ctagatgttc 600 tagccgtagg gaatatagta tctgctccaa ggaaatccga gtaggggttt taaacttcct 660 caqcctcaqt ctcaagggtg ctgtaggtac gatctaaata ggcgggtagc agccagcaag 720 caqagtcgcg gcgtgtagat aaacccttat ccgacgttca ctacgaagtc ttattggcta 780 atagetgtat geettetaet ttatetggee agegeetgge etgteteate eetatataga agggcgaaat atagaatgga ctcagcgatt gctggcttcc cactatttac atacatatga aggccacggt cttctggagc ataatgactt gattatataa gcctatacaa tgtcaacccc aattatgeet tteeacette atettegatt egteactegt gaeteetgga etaeggagta 1020 ctcccatatg taaagtcgca atagacgctc ttctcaagcc aaggaaaata tgcggataat 1080 gaggtattaa ctctaaacac ttttattcca tagaggggta catacagatc ataagtgtcc 1140 aaaatggtaa aatacaccca ctaaacatcg ccaggcgttg ccatccgtca tcgatggcgt 1200 cagatattta tacaaacaag ctcaataacc cagcatcgca gaaagcagaa ggcatctctg 1260 gcagcaaggt gactagtgaa cgagagagcg acctagacct ccatacatca tacaccttca 1320 ttcaaaaacg taataaaagt cagactgggt atgccacgcc acgctatgca gtcctcggga 1380 gaggaacaca gaagagatcg agaaaaaaaa aaaagaacca agttaagtat gtactgagaa 1440 cagaatcata tgtcggggta ttagttgaac tgtttcatat tcatttcggt ttccgccaaa 1500 aatattgctg ctcaggttag tacagtcatg gccaagtctg aatgagagac aaaccttatg 1560 ttgctttcga cagtttctaa ggccgggttt tcgcaggtct gtgacgacgg cttcacgacg 1620 cataacatcg tcatcgaagt caggaatgta atagtattcg gcttcaagtg gctttccggc 1680 agcatecttg cetteaegeg caactttgee gatacaettt gtggaateca agattaeeeg 1740 aatctcttct cttgaaggcc cgtggcgcga gtggttgtct gccttccaga tggaagaggg 1800 aaggttgtca aggatggtag aaaaaggcgt ggatgacaga cgtgagaaag ccagttggtt 1860 gacggcgtga ttttggacgt gctccgcgtc ttcattgata acagctgtct tcttcttctt 1920 cttettetee teeteeteet gagaatgtte eactggettt gaaggetgtt ttggagatgt 1980 1993 aggctggaga tgt

<210> 3214

<211> 2005 <212> DNA

<213> Aspergillus nidulans

<400> 3214

ctctgtatca cacaaccaq aacatcattg caaggacgca ctgatatata ttqqcaaaga 60 aaccgcagag tatttctttt ggaaacgcaa tgttcaatca cattgactac gttaggtgct 120 agagetatea etteccatga agtatgttte atateteagg teettteegt eccagecate gtcttctctt ttttgaccca tatgaggaat ggccccccta atgacttacc gttgctagac ggctatcgcc acttatcgtc gtcgtcggtt gcgaatgaga ctgtttgaag acgccttaat 300 tecttetacg cacaaatacg attacaetca teagetgeet ttgttgetge tgtegetgea 360 agetteagge etagetteaa tegteggatg tgaetateet aettgaaact aaaaaegete 420 tatttacatt cttgattcgg agtcatctcc cacagccagt gcatgcgcga gggggctatc 480 540 ctgataagga atcaccggcg aatccgacca caagttgtga gatcaagaat gtccgaacca tttttggccg agtttctaac ttttctagca atatggacga tgacaatatc cacgagggtc 600 teggtagett gaategatgg tegeacteaa egaeetegag eagteteteg eetaattatg 660 tgagccaccg gcgtcaagag agtgccccta gattgtttgc tacagataac catttatcct 720 780 acaagaagat gttgagctta gaaaacagcc cccaagctca cttgctcaaa aagaccgatg atgcaaccgg catggacgag ccgttcatta gacatcataa ctctcagtca tctactgaaa 840 aaagccatat ggatatteeg ttgteagate gaaeggaget gaetaeggtg tecaaateta 900 cagcacataa cacaggegea tttttattge agecagagee tteatatett gagtteatat tegtacagea eggaceaega acaeaagee gtteaeegga gaaggagtge tegaaeggae 1020 gcacggtggt tttgcctctc aaatcacaac ccgaccccat agccagaacg acaagcggag 1080 acagggteet teecaaaagg caatgetete taaageteta cagaaggeaa acaetgetgt 1140 ccttcttgat aacgcggcaa actttgaagg cgccatggag gcttataatg atgcttgcca 1200 gctactgcaa ttagttatgc tccggagcaa tgggggagag gatgaaaagc tcaaacttca 1260 agaaattgta agtataggtg tccatgttga aagttgtagc taatcatcag cttggatagc 1320 gcgatacata tatgatccgg gttacagagc ttcagcgtat ggattttcct tttcgagatg 1380 ttgacagcaa ggcgcttcct gaacgcccac ttagtcaaga atcgtatgga gattacattc 1440

aaagtgtccc agaagatgct tacagcctct ccaaccaaga tcccaggttt atggataagg 1500
agccgcttgg cgaacgcgac acagcatctg aagggtcaag gacttttgtt cagtctcata 1560
taccccgagg cgtcaatcac tgttgccatc ggctttggat gatgacatct acaaccgagc 1620
tttctcgtcc actgcccaaa atcagacgga tatttcacga cctgtgattc agggggggcgcc 1680
tgttgcacat agacgtgttc attctgggac aaaccccgca aactcggatg atccacttcc 1740
gagagaaaac cagcatccac ttcactcccg gctatccgag ttatcaatcc tcagcgcca 1800
agcccgggat ccgaatgagt ccacctcgtg gttagatact attgacgaat ctggtgcctc 1860
ttcatctcca tcattgcgtt cgaatgcatc atccgtgtat ctgcgtcgca ggagaagcac 1920
aagccttagt cacggtacag aagctgaatt tgatgccgc catgaagcag ccgtgaaagc 1980
tgcttatacg aagggtttag ccagc 2005

<210> 3215

<211> 844

<212> DNA

<213> Aspergillus nidulans

<400> 3215

catccggatc aacttcgact gttcccgtga tggaggtagt gaatttctta tccggaaacg cgatgcgtgc aatctgaggc tggaaggcgc cggcgacgag ggcacggaga aggctgcggt tagaggcatt gctgttgagg cgtgaaaacg agggggagga ttcagagtag tcaacaggaa cgattgcggc atccttgagc gagctgatga attgggcttt gttggaggat atgtcgcgga 240 gggtctggtg tgaaagaaag ttggttgtgc accaggactg cgtagcccag tagcccagag 300 ttttgacaag atctgaccag gtttggtagg cggaaaggtc agtgagaagg tcgccatcgc 360 ccttagagaa agcagctctg gcggcgtttg cttcttcgcg acgctcgcgg ggtgacacga agggagattt cacagttaga atggcagcga ttgtgatggc ggcgtcgatg cagttgaaga 480 tagagccgta gaccattagt ttgccgcagc gcaggtcggc cgggattata gacaggtatc 540 600 ggcctagggc tgttagtctg tcgtgatcga gggctccgac acggtggagg aagttgaggg ctccttcgac ggcaatggtt tccgggggcg taatcgtgtt ggcaaggaaa gtggcgacat 660 cgtcgattcc cttcatcgag cggacggaaa gacacagctg ttctaaaggg acgcggcgga 720 tttcggggtc cggtcgctgt ggcatgcttg attctgcttt gcgcgtgtag agtttgtagc

aagtaccagc	tctaactcga	eeggetette	.cacggcgctg	cttacatgct	gcttgagatg	840
ccat						844
<210> <211> <212> <213>	3216 786 DNA Aspergillus	s nidulans				
<400>	3216				•	
tttatctcgc	tcgattttaa	ctaacgggga	aacaataaca	gagagtacga	ataccaatat	60
actttcccca	gcaaagccaa	gtatcatgaa	ggattacaac	caaaaccatg	actttggata	120
caatgagaag	agtgaaaaac	ctctacctag	acaagggaaa	ggcgccgtgg	acggcagcaa	180
aaatgcatcc	ccgaagaagt	ccagtacccg	cacaccagtc	tttggcaacg	atgggaataa	240
aagcggtaac	aaacaaaaga	agagcggggc	gataaaatcg	aacactccat	cacttgatgg	.300
aatcgaagac	tccgagatcg	cgacaacagc	agatatgcct	agtacccggc	cgtcacggcg	360
acgaggtact	gttgtaagtt	atgccgaacc	aaacttgagg	gacaagatga	gacgatcgac	420
aaacgagctt	ggaccggccg	tcagcgggga	taaaccaagg	aaaatctact	tcgaacacag	480
agtcaacccg	agagtcacaa	gaccgaagga	ataagcatgc	ctccgtaaaa	aaggctcgaa	540
aatcaaatat	gacaaacggg	gagaatgaca	tattggatgg	acataccctc	gacaaacacc	600
cacatcggca	gaacactgca	cgaggtaacc	accagttgtc	tttttacaac	agttccggaa	660
tggaatcaat	gagcgagggc	gaagcagact	cgaatgcgag	caagaaatct	aggcggcaat	720
cttaaaacac	aaagaaccct	ggacagaaca	ttgcaccaaa	tattgcgagt	gggaagaagt	780
atcaaa						786
<210> <211> <212> <213>	3217 5703 DNA Aspergillus	s nidulans				
<400>	3217		·		·	
ggtaatgtgt	atgtgcagac	catggcatgg	cattacatct	tgcgagggtg	ttggtcaaac	60
ttatcagtct	gctgcttaca	cccggaggct	tagtagatat	gacgatcgca	gtcatttgtc	120
tcacccatgg	aatgctgatg	cctagatgat	gactagaagt	tgtcagtatc	acgatcctat	180

aatctttggc gccacaacaa gcttttcaga caatgtatct agctggactt ccgcctgtgg cctccccct tggtgtatac aactggacat atccgcaacg gctcagtcaa gctaagccca actggttcct ttctgatatt tggagtatta ttgaagaagc ttgccggctg atagggctgc 360 ccagggtcta tagcccgagc atggtggagt tggacccagg gcttcatgtt tctcggagta 420 tcatcatgga taaagctaag atggcctcgc tggaaaccat gctacagtcc accatgatca 480 atgaggtete acaggecegt tagttteata ageegacaaa etecaegtet eegatgteae 540 cactgtgata ttcacgcagt cgctgatccc tgacatttag tgaagggcca catttctcat 600 gcaatggatg gtactgcgcc caagttatcg attatcccaa tgcgcaatac aagtacctta 660 acagggtttg tctgtcactc agacgtcatc attctcaagc tggggttcgc ttggccaggg 720 caatgtccta cgagctgacc ggcgttgaga tggccacaaa atgctacgta agaaaaacaa 780 atttcttcac tctggagaag gtcattttcg ataactgctg gccgtatggc atagagccac 840 cctatagctt tttgatccga tacatagtct ccctcgacaa atcgcagttt ttcacgcagc 900 agaagacttg ccggggcaaa cagcatcatg tcgatcctgg agggagtgtc ttccttgtcg agctggcgaa ccagcagagc gatactgtca atggatttgt gtagttcatg cgcactttac 1020 gccactactc gtactatcgt cgtgccagcg ttggttcaaa caaagcgtaa agacgctgca 1080 gtcctctcgg gcatgtcctt tcggatgaaa tagccattgc gaaaagtcat agaatggtcg 1140 gcatagttgc tgaatgattt gcacaaccga tgtaaagacc gattttagct gccttgctgc 1200 caataggaaa aatatatata geggeagtge gtgettggae eaggaatege eteceageae 1260 gacttatctg cacttcttgc agctgccaag atataggttc gttaagaaaa gcacgactat 1320 gatggctcct gaagtagaag accaagaatc caggaaagtg gtgacattga agaggatgtg 1380 gtgtccgatc aggtgacgcc gttccggctg cctgccaaac aaacaacgta agctgaccag 1440 acteteacea egteteteet tatgteteet gteetettea tetatteeae ttgttatttt 1500 cccggcgaca tgtagcatct cttctgtcac tcaaatgcaa catggtgctc tccttatcag 1560 tgcccagett etecegetee ageacaacea eteceeeget tegateaaga aatgccagta 1620 ccagctactc cgcaacgctc agcgaggccc ttcgcaataa cccatttggc agctcatcct 1680 ctcgcacgcg gccgtcccta gcagctttcg aagaccagaa gcgggagcag gaagaactta 1740 atgeegeget tgaaacaete gteeaaatet teeetgaegt caagategaa gtetteegeg 1800

agetgettgt tegattegat ggeaatagta ggetaeetgt etgegtegag cageteetge 1860 gtcataaaga gaaatgggtg gcagggcgat ggaacgttcc gtcagcgtca ggaccggaaa 1920 atgcaccggc ggccgcgggg gctgattccg agacgcccgg atcgttggtg ccccccgacg 1980 aggggttccg gacggaggat tacagggctg ccgtgagggg tgttctggtt aaggaattca 2040 gcgggctgag tcggagtacc gtggatgcgg tgctggcgga ggtgaatttc tgctatcttc 2100 gtgctcggcc tgttttgcaa gacctttcgc ggaagacttg gcgggcaaca ttccaaaaca 2160 tgcttccttc gttcaggcgc aggaaggaca aagatgacag ccatcctctc atcctgtggc 2220 aacgtcaggc ggacggtgaa ccagttcccc ggctcaagga aaccggatgt gaggagctgg 2280 atcgcgagct acatgaatca ttggtagcgc cggtgcttcg agcgcgacaa gaggagcgag 2340 aacgggcgga catggaattg gctgaagcat tgaatgaaaa ggaagccgag gcggctaatg 2400 cgttgtacga gtgcgagtgc tgcttcacag atgccacgtt tgagcagata gcgatctgct 2460 ccgacggcat gcacttcatt tgcttcaact gcatccgaca tactgttcac caagcactct 2520 ttggccaggg ctgggcttcg tctgttgatg ttgaaaggtc gacattgaag tgtttggcgc 2580 cytctcccag tgaaccctgc aaaggtatcc tcagtgccga tctagtcaaa cytgctatac 2640 ttctcgacaa ggctggcctg gagacgtact ccaagtttga atcaaggctt gcatccgatg 2700 cccttctcag gtcccaattc aaactcatcc gctgtccttt ttgttcctac gccgaggttg 2760 atcccgttta tcatcccccc gcaaacggtg ttaattggcg ttccgcaggg acggacttat 2820 ctctactctt ttaatgattt tcttatttct ggacgcaata ccctttcttc ttgtgatcgc 2880 agggataatc tatttaatag accetacege cettectaca atteteaaca actetetact 2940 aaacctgcgc ctcaaagtcc gcatgaagaa atttacctgc gcgaatacaa agtgccgacg 3000 gaccagetge ateacetgte aaaageegtg gegtgaceeg caegtetgee atgaacettt 3060 gettetggae etcegageea eegtegagge egecegeaet geegeagtga agegeaeetg 3120 teccegetge ggeettteet tegteaagte etceggetgt aacaaactga ectgtacetg 3180 eggetattea atgtgetace tetgeeggaa agetettggg ceaccactaa aaaccegega 3240 ccgccgacga cctctacgcc aagaaaacat caaccccatg ggcatcggcg aacgtcacga 3300 gcccaacctc gatccccaac cagaccagga tgaggacgaa gacgaagaag aaaacgaagg 3360 ctaccgccat ttctgcgaac acttccgcgc taacccgggc tcccgctgca cagcgtgcaa 3420

caaatgcgag ctctaccaag atgaagacga agaagccgtt gcgcgacgag caggcgagaa 3480 agccgagtac gagtggcgca ttcgacacca aatggctgct gctggtggcg ccacgtccgc 3540 gtctacacct gctgttgcgg gtatcccttc tgtcaatgta aaccacgacc tatctgtcag 3600 caccgcgaga ggcgcacgat atacgacgat gtttttacga ccgcgcggca agagtttttg 3660 gtactggctt gatgggatgt ggcagtctgg acaatggaag gttgaggggc aggctcttgt 3720 ggattggatt ttagagaggg ttattgttat tcaggatatt tgacacttgg ttcccatccc 3780 gtcttctcct tctaaaactg aattctttta aacttaccag cctactttgg aataccgtca 3840 tggcaagcat gcattgcatt gcacggtcga atttgagcct ttgagtcaag attggacagc 3900 gattggttat catacagget ttggegttet ggtttaggge atagettaac ttagegttge 3960 taggetacae gatgttatga gacatgaata cattetttae tetgtgaeat ategtgatee 4020 cattcgttat ggactgcttt gcttctgcag acattctgcc ttccgttaac catggcatga 4080 agagetgege aaacegeegt etaacecegg teeggagaga atgteeacea caceaegtae 4140 tgcttaaggt gccatatttt agacgcccaa gagtactatc tcgcacctac aacctaggcc 4200 gcaagagttg acatggacgt gagctcttac tatggaaggt acggacgccc atacctcgcc 4260 tegecteeca egtegagaac caacaageet egeettgeea egggetteae gaagagtgtg 4320 caatctactc agtcagccgg taattggaca gctgtccttt cataatcttg atccggttct 4380 gcagctttca gcccgtgcat agttccaaag attcatgggg ctggaccggg agcagcggcg 4440 gggatagagc cagattaagt agattagccg tgtgagatct tcaggaactg gagattggac 4500 tgtagtcatc agtttactac tcagggctct tggttagggt cggcacaggg cagggtgtgg 4560 tttagaatcc acattcacag cgccgtcgaa ttctagggtt tcgggaccaa aagcacggac 4620 cgccatatac ttgatcagct gggttcttaa catactgaag accaatgttg tcaaggagct 4680 ttacttaata aatgctaggc tgaaacacga cgtggtctgt agatccaaaa tctcggttta 4740 gatatatgag agaccgatcc catagtgtag caacccaacg tatgctcgta gttatgacgc 4800 agtgacaccc aattttttgg ctgtaatgcc cacatcttca cgttccatca gaaccaacct 4860 gggaagttgt tcgtactccg taggggaaag ccgatgagcg cttctaatgc tatgtcacca 4920 atcatatgac ctttttgacc gaaggtccac aagggcacag tcgtgcaaag aaaaagaaaa 4980 tatgggaget gaggeeegga tataaagaag teggaagegg ttecaattge ageeaacett 5040

gggagtactgg gcggtgactg gcgaaatcgt atcgcaagtt gcaaccatgg cgcttactct 5100 gggagtactg gcgctcgctg ctcttgggcc gcagtccgta actgcggggg ttgttggtcg 5160 ccgctccgta ctgtcagtca gcgattcgga ctgggatgcc ttcaatgcga gcgtttcggg 5220 gcggttgcaa gtcggcgtgc cgatgcttgc gccctgctac acgaactaca acggacagca 5280 acaggtacgg tacagtgtta gacagtggct tgagttggct gtgctaacaa caaataggac 5340 gttgatcccg aaatgtgcga caccctgcaa cagaaccgcg ctgaccatct gttcgtgacg 5400 gaccagtttg gcggctatca ggaatcgaat tggggcgggt gccagaggac cggggataac 5460 tgtgcgatga tgcttacggt gccggatacc gtgacccctt tgtcgaggcc ctgcatgcag 5520 gggagtgttc cgacgagata tgttgacgcg cagagtgtgg aggatgtgca gaagacgctg 5580 cagtttgccg gcaataacaa cttgcggctg gttgtgaaga atactgggca tgactatact 5640 gggagaagct cggctcccga ctcacttccg ctttggtagg tttgtttggt agtttgcgat 5700 taa

<210> 3218 <211> 878 <212> DNA <213> Aspergillus nidulans

<400> 3218

accttcgccg cctgatggag acttcgcagg ttcccatctt tggcatctgc ttgggtcacc 60 agetettgge cettgetget ggtgetegta etgttaaget gaagtaegge aacegtgeae 120 acaacattcc tgctctcgac ttgaccactg gtcgctgcca cattaccagc cagaaccacg 180 gttacgctgt agatgcctct accctgcctt ctgactggaa gccctacttt gtgaacttga 240 acgactcgag caatgagggt atgatccaca agtctcgtcc catcttcagc acccaattcc 300 acccegagge caagggegge ectettgact cetegtacet ettegacate tacategaca 360 gtgtcaagaa gtacaagaac agtcaacttg ccttccaccc cagccgggag actattccca 420 gtcctctctt ggttgatctc ctgccgaagg agcgtgtcga tgttgcccct actatcggta 480 tgcagaacgt tgctgctgcg gcggccgctg cggctgctgc taccgcttag gtgaatctgg 540 gaaatatatt ttatgaagtc ttggttacgg ctgggcctaa ttgtttatgt ctgggtcata 600 ttgttctagt tcaaatatcc tctttcaaat tgaatatatt tggacattgc ttctaaacaa

acggaggttg tccaatttt atcagtcggc cgtgatctct tttaccaatg cagtatggta 720
gatattttat ctcgtgtcct ttatcattca tctacttagc aacaatcgaa ggcgcactcg 780
tcatcaccgc ccacatgtct caacccagcc cacagcggaa taggccttgc gctagcaccc 840
aagcctgtgc agatttgtac gtctccttca gcgtccgc 878
<210>

<210> 3219 <211> 1285 <212> DNA <213> Aspergillus nidulans

<400> 3219

cagaceteca atcetgattg accggaettt caaggttteg ttetttgegg gaegaaacge 60 agcettegtt ggaateggeg teeagagaet gtttgggget atgeteegta etettegtte 120 tcaaatacct gtcaagcaga ctaagtaaaa taataaacag acaaaaccat cttttggatc 180 ccaacagcaa cgaatgctat cttcaaggtg gctgctggag accatcacca cgcaaggcga 240 ctttccatgc ttcttacgtg ggtaagtagc agcctctaat tgtcttgggc agtgccatga 300 ccaccgacat ttctctccgt ctgaactatc tacgctggac attagtgtcc aaggtagttt 360 gaaaaattct catatcctcg agcacccaac tcctactccg tgctctgcct gaatttgtct 420 ctagaagcca gtgttactcg gtgctttcaa cggtccctgg gctgccggca gcgattttgc aaatatacca tcatgtaagg agagcggaat tgctctaaag ccagtatcca ggtactgaat aaggeceage cagacagete agagetetee aggettaget cagateteee attteeeqat 600 tecgcaaceg tgcaaceege agtacteegt acagagtete tectacetae cagtatagaa 660 gagaccaaac aacccaagac accaaagtca cacctgtgca tccgttccct cgttcctgcc 720 tggtcctcac atctccctac atgagcaggc atgagcatga ccacgagcat gtacgtacgg 780 agcagagaca gggcctaaac tgcatcagtg atagtcggct caccgcgggt ctcccgggac 840 aaccatcgat tggcgatgat tggcgatcct gctgccaact catcagcgcc catttatcac 900 atcacatttg gcactgacct ctaccagtca aggcggctgg ttgggtaggg gtattcctgg ctgccataac tgccgagata atcatcacac ggaataatgc agttggaacc taaccttgag 1020 ctcagttggt tttgagatat ggccccgcag cccgatggag accgtcgacg gagtcttcaa 1080 gagcacggga gaggcggtct ccagccaccg gccacttctc cacttgtagc caatggaact 1140

ctgtctacga gagtccagcc actttgtttc ttgacacttg cgttcaactg ttgacgctcg 1200
agtctctgaa gatggttcaa gagagcaaga accgtggaac cgaaattgag ccctggtccg 1260
cactttattc cagtgcctca tatgt 1285

<210> 3220 <211> 1761 <212> DNA <213> Aspergillus nidulans

<400> 3220

gaagaaagta aaaaatgcgg aaagaattta aataaagata cgattacgaa gcaagaagaa 60 aatttttaaa tatagaaaag aggtggaatc tgatattgta taattagaag aaaccaacta agctatgtaa aaggttagta gagtgttaga tagtaaggaa tgtgggttaa ctaaaaaaaa 180 240 agaagtaatg atggattaag tacaacagac aggaaaggac ataacgcagc agtagcagtt gaaggggaat aacaagattt tcaaaagatg tatgctgaaa ggatgctcgg ttgggcaaat 300 gtaatagaag agggtcttcg tattacattt gcgtcatgaa agagcgagag ctctatatat 360 420 ccgtatgccg attaaggtgg atgtaaaatt gtaaacaaaa ttcgacggtc gaggagcttt ttgagccccc gatattttgc agtagcccgt cccggaaaga gacgcctttc cagtagqcca 480 ctcggccgat ttgtgaacaa tcaaaagaga ggtttgttat atatgcagca tttcgaaaag 540 gcaaatatga ccctaacgaa atattgctac atgcatgttg aaatctgagg accataatgc atgagaatcc cggccaaaca tgatggactt catttttcca actgaaccgt aatctcctct 660 ttttatcttc tgtcttttaa ttttagattc tttgatctcc ccaccgcgaa tacgtctgag 720 caacagcgca gggttcccgg aaatgaaccc acgcttaagg tattggttgt tcctgaaatg 780 gggcgcttgg ttgaatgtat ctagtttggt tgacatgcct taaagtcctg tattattata 840 900 caatcagtta gaatgcagct tcttgaaata tgcaatacac ctcggggaga agcgcagtga tgcttgatgc tggggcctac acaccacgcc cggcaatggg ttctcggcta cgatgcagac tcgccaacat cgaaggtgga ggtcataggc ggcatattct cgttcatgaa cccaaacagc 1020 agatettage egageagaga aaateetgaa agtaggeega etgeagetgt teaaaetege 1080 ctgcatttgc atcgtcacag cttgtgctga agaactgccc agaccaagca ctgcggcagt 1140 ggatctggcg ctgcggctag agcagatgct gaagttcggg actatatgaa cacgaattgc 1200

gacttacagg gcagttcctg cacatcattg ccggccatga acctaccgat aatgcggagaa 1260 gacttacagg gcagttcctg cacatcattg ccggccatga acctaccgat aatgcgagcc 1320 gtatctggag ctccagtgtt gggtatggca agcgcaccta tgcattctaa gcttaggctc 1380 agcaatgttg aggattctag atttacgtag cgggtagaca gaccggtagc ttagggtaag 1440 ggcagtgata tggtgagctg ctgctgcgca tcgcttcaca agggtgctca tacttgaggg 1500 ccagtggctt tgcaagcctt atttgcgca gtgatgaaag aactattgat caaaataaga 1560 agtgagtgat atggtgctaa gcctatgaat ccgtattcca acgattggtg cggactgacc 1620 agtacccttt tccaggtgta ggcgtaaaca taactgtctg aatctgtcag gtcctactat 1680 gtacaaaaagc atgttgtcg tgaacctaac agttatatta cattccttta aagctaacac 1740 ccaattgacc tatattgtcc t

<210> 3221 <211> 1070 <212> DNA

<213> Aspergillus nidulans

<400> 3221

aagcagcgcc cgtcaagcga ttcgccccgg ccttgggaac caagaggcgg gggactttct 60 tttcaggaat gggctacttt agtcggtgaa attagttacc tcggactgga agcagagatc 120 tctatcaagc cagtttcgga gataaacgag atccttcggt gatttctgaa accctggccc 180 tgttcagccc tgttcagcct gcctaagctg gcctcagctg aggcctccac ccgacaatga 240 atctcattta cgcacgactc atgtctcatt agctttacgc tgacctagtc gcggtggatc 300 agcaagcctc ccctcttggc cgcataccgc taaaagttac taaggcttag agaccccgtc cccacaccgt tttagcccgg tccttttggc cctgcactag ccctgctagt cggcctgctc 420 gttcccaccg gccttgtcca cctcggactt atacgaccta gccattggca ggctgggcgg 480 gggcgggctc tggctgagat ccctagtaaa gagggaaagt cgaccttgtt gtcataccgt 540 cccaagaaca agaaagaact tactcaccag agaaagacgt gacccgggcg tcactgacga 600 gcaatgctgc aagcaatcgt gagcgctgtc cttctcaccg tgtcttttgg aggagagcgg 660 gctagcgcgg tccaggtctg gcagagtgtg gacgaaatat ctgctgcagt gccggccgac 720 tgtcgggatg cgctgaccta caacatcact tgcgccaacg atctcgttac ggcgcaagat

getgtgaacg gagcagetet ggtaggagtg geggcgcagg cetaetgeae egegeaatge 840 egtgaetete tgeagacatt eeaggagaat atgegeacaa getgegggaa geaggagtae 900 gagetgtatg tgaacagtae gacgaageag tegeeggeag tggtegeega eggtetggtg 960 tgggeteatg aactgteatg eatecaagae tegtaegtat egetateeea eeeageetgg 1020 ageggegaet gtgeagaeae eetgaegga aacagetegg ettetgeete 1070

- <210> 3222 <211> 2431
- <212> DNA
- <213> Aspergillus nidulans
- <400> 3222

gctgtactgg ctgggtatct gggcgacacg aaggaacagt gccatcactg ccgacaccag 60 gaaccagttg aagaccactt gctgcagctg gtaaatatca gacgatgcgt ggagctgcgt 120 tatgaaacga attgagtett tggeeatgte gaetaeggte tgggtetegt ttgggaageg 180 catcatatgt gctgctgaat gtaggacagg gcgatggatg agcatccgca gctggtttgc ccggaggtac accaaggagc ggagtcgccg gacgttcgcg tctcggcttc tgcatagcct 300 gaggtactic gcaggcgcaa agagtctggc agagcagcaa cccactgcag gacttqccag tctaggtagt tcatctcgtc cttcttgagc tcgttggtgt tattgaaggc tgatataaac ctccagacct tagctgctat cctactatac cggaccatca cgcgcaagta tgagtcctcc tectetgget etgggageea ggggtegata teagagteat ceatgetaaa eggeatgeee 540 gttccgaagc tccacctcag atccagtacc cgaaccgacc aaaacagctt gagcacgcgg 600 ttettteetg ettteataat ageaggatge ttgagtgttt etetteggtg eagacettte 660 totaagcaca ttogttocac aatooogato gttogocaag caagggtoto otogtogato tggaaataca atategeeta egeceattag attegttggt acteeagagg tgegaettae 780 cacacgcgcg agtaacgtaa tgcttttgag ctctggggct gcccagacat agtggtttgc 840 agcatetega acagtegeaa acaaaeteat egetaaetea etaeteeeae tegeetetge 900 tgtcagagcg cacgcgaata ccaatcgcag gatgtgaacg tcatcactgt ccaactcccc 960 aatgccttgt gcatgagcag gcgcttgaag ccagggcccg gtttctgtcg gtccgtacaa 1020 caactggaca ttatgtagaa gctgatcaag ctccactacc gggtacatga ctcccatctc 1080

ctcttcatac actcgacaca gccggagggc ttccgtcttg ctgatactcc atagtggatc 1140 cccaacatga caggatcctg gcgatggggg agtcggcagt ggcgacggtt cccgcgttat 1200 gtcgccttca ttacgctcaa cttcaattcc gcgttccttg agactcgact tggcaagatc 1260 gaagctaaaa cccgacgtcg tgggaccctg gaaagtcaat tcctttgacg ccatggagat 1320 acgcctgtgt agtcgcggtc cagcctcgga acgtggcatc gaagctgatg cattactctg 1380 ggcgagcgag tggacagacg cggtaagggc actaatctgg gcctgcatgg cattcatctg 1440 ctcgtacagc cgctcgatcc cactacccag ttagcctaag cctcgtcaag acagcactta 1500 ctcacatatt ctcatttcct ccaggctcat gagaattttc atagacgcag gatatgttct 1560 geogaecaea eetgeggeae ggtegeteee egttacaett gatetteegt tgtetgeatg 1620 cgttgcttga aactgtcagc aaggtcggag attgcggccc tagaataatg gacagtctac 1680 aaaccaggee ttageaatgt acttteteeg eetetteete ggegeageat eagetteace 1740 ctcgcgctct cgatcaccgt tgacgctgac ggtaacgctc tcatcaggac ttcgttccca 1800 gacgctcgga tcgtgggtgg agatgggcgg attcatgatg aacgtgattg attcagagac 1860 ggaggcgaca ggggtagtcg ggccggcaag aaaaggagtt ggaggtgaga cttggaaagg 1920 cggccgacgt tgacggcggg cggcctgagc gcaggaaaac tggggaaatt gcggggaatg 1980 gaattggttc cgctgtggtg tcgattgctc agggattcgc actcccgaag aattgtggct 2040 gcttggtact actgatcaac catttaatgg tcttgggaga ttgcatattg ttgcatttct 2100 attggttgcc ttatttttat ttgcgctgtt gctgccctca gtatactcca atcgaccatg 2160 caggigette giecteteet caeteteege aatecatite ettaceaaga caggatetet 2280 cggtttaaac ccaaccttga agggcttcgg ctccgtcgtc aaagcggtcg ggatcgcatt 2340 acactcaatc gcatcgagga tcggccgatc ctcagccctc ttagctggat gcatggtaaa 2400 tgctgtgatc agacggacgt aagcggtgaa g 2431

<sup>&</sup>lt;210> 3223 <211> 2955 <212> DNA <213> Aspergillus nidulans <400> 3223

ccattatcga taatgacgct cttgacaaag ccgatgctgc taatggagac tacgaatcaa 60 gtagccaagg tgatgactcg cggggaaatt cttcgtcatc aagcagccac accagcccaa gtatccaage cactacacet gatatcaaac egaatactee agtgeetetg gatgtegaeg 180 cagateetet eggeegagga ttteagegaa etatgatteg egetgageet geeteetttg 240 cccagtcgag actatggttt ctgacacagt atcttcatga tccaacaacg tacaatgtta 300 ccgtccgtta tgatgttaga ggaaatcttc ctgcttcacg aatcgtcagt tcccttaaca 360 gaactatctg ccatcatcag tctttgcaaa catgcttttt tatggactca gataaggaaa 420 cacttatgca aggagtcctt tcgccgtcgt acagttccat caaacatatt ccttctggaa 480 gcgagcagac agtcagagaa gaatataacc ggttgcgcag tcgagtttgg gatctccaga 540 taggggaaac gttcgcggtc actgttgtct cgttgtcgcc cgagcagcat accattatct 600 teggatacea ceatattgte atggaegggg tgagetggea cetttteetg egagatetgg 660 acttagcata ttggctgaga ccgctccagt cgcttgagat gggatagatc gtctggtcaa 720 gagagcaatt tcagtcagca cagcgagtat acttcttctg accagtcgag taatggctct 780 agcagcgete geeteegeet teggteaage caetgetgte tatgggtete aegagetett 840 gegageeget eggetgttat gatagtettg teateagtgt eegtattgag egeeagegtg 900 cttcgcacat ccggcgtgtc agtcagtcgt aaaaagtcaa accettccac ttccatttag ccgttatcca aagcatcctc tgccgcttgc tgaagacaga agatctttgc attggtgtgg 1020 tggatgcaaa ccgaactagt gaagctcatt caggaaccgt gggatttttc ctgaatcttc 1080 teceggteeg etteactaeg agggageaca geacatteea agatetggte teeteaacea 1140 aacgcacgat cctaggagcc atctccaact cggaggcgcc atttgatctc attctcgagg 1200 atttgaaagt tttgcgaagc atagaacaca gccccttgtt ccaggttgct gtcaattacc 1260 gcatgggcgc catgctccaa gttccccttg gagacggcac aatggaggtt gcggccgccg 1320 acgatgcaaa gaacccatac gacctcagct tcggaatcac ggaaacttca acggggactt 1380 gcttgttaga actaactagc cagaaacagc tgtacacgga gcagtccaca gagctcttgc 1440 tacagatgta catggacgtc cttcgcgcct cgtccgacaa tccttcactt cctgtaaatc 1500 agctaccagt cactettgag cegteaaceg ggaaageeet tgeegteget aagggeeeta 1560 gagctgagta ttettggeeg aacacactat gggaacgata tgaegetate eggaagteet 1620

tccctgagga aactgccatc aaggacggga aatcagagtt gagctactct cagctgacca 1680 qqaqtqttqa qaaactcgcc gcgatqttaa tcagccaagg tqttaccgct ggagatagcg 1740 ttggtgttct cettcatecg teaategatg ceattgeetg tatgttagee ttgetgegeg 1800 ttggatgcat ctatacaccc cttgacactc gactgcccgt ggcccgattg agtatcatcg 1860 tcaatcgctc caaatcttcc ttggtcttgt atcacgcttc aactcatgac gttgctctgg 1920 aacttggaaa gttctccaaa cttgcaaatg ttgaggatat gtgtgaatcg ggccaagcgc 1980 aagttccagc aattgcgcct caatcaaatc cggcatcttt tctgttctac accagcggca 2040 gtaccggcac acccaagggc attttgctta gccagcaaaa ctttgtgaat catcttgctg 2100 cgaagaccga caaactgaat ctcggcaggg aggttgtttt gcaacagagc tctttgggat 2160 tegacatgte egtegtgeag aetttetgeg etttgggeaa tggtggaaet ttggteateg 2220 caccgaagga agcgcgggga gaccccattg cgctgtccac aattatggca aaggaacgag 2280 tgacgctgac gattgccacg ccctcggagt actccttgtt gcttcggttc ggcctagagc 2340 aactccagag geectactca tggagacatg cetgeatggg eggegaggte gtetegegge 2400 agttggttca gcagttttgt cagctggacc atcctgatct ccagctgacc aactgctatg 2460 gtccgacgga aatcactgct gctgcgacgt tccaagacat ctctctccaa atgaaggacc 2520 agagtaccac cgatggatct ctggttggaa aggccttgcc caactactcg gtctatatca 2580 tggacgette tteeggatet ceagtgeeea ttggggteae eggegagate tgeateggag 2640 gccttgtggt tcactgggta tctgatttct tggaacagac ccaccgaaat tcgtcgggat 2700 cccttcgtgg ccaaggactt accccggtgg acataagtca caacgggaaa tggtgttcag 2760 ggatggaccc ttttttttggc ccttgacggg acacaggcaa ataatggtgg gatggcccta 2820 gatgcacacc tetecectga atacgggeca acceaactge attegtggeg gtecatgttg 2880 gtcctccttg gacacccaat aaataattgt gactctccac acttccaact tagtcccctc 2940 2955 atacaacatt atgtg

<210> 3224 <211> 1378 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 3224 aacaaagccc accctacgaa aatgactccg atcgatatga gatcggttta tcagggttta 60 cccaaagagg tacatactct acatagtaat attccatgta atgcagaaac tgtatgttga gcctctatgc agaagcggaa attactgcgt ttgggaaaat tccgacgccg gggagaaaaa 180 atcagaaaga gtcagtagga gtggggtcgc ttccagtctg ttaaaagtctg ttgagattta 240 aaaaaagacc gtctaaaacc tcagttagct cagactctgc atctcaacag accttgactt 300 tgtatacaac tgcatacatc atcattcatt gcttgtgaaa gccaccggcc cgaacagagc 360 tccggggacc tccgagagca cgctcgttgg ttcaatccat cccaattcca cccaagacga 420 attccccacg ggtcgagagc cgacccctcg ggaaactctg gcggccaaac ggacttcgca 480 gcacatgagc ccgatctcaa ggcatttgga tcagagactc ccactgcqtg aacttaactc decettetgg teegaaagga ttgeecaaee eecagtegae gttgaatata aacceetagt 600 cogototaco cotoctaaca tototgateo toaacettot gocataatgt cgactcaace 660 cgctcacccc accttgctca ttccgggccc tatcgaattc gatgatgccg ttcttcagtc tatgtcccat tatgcgtgag tttttgtcat tcgcagtcca tcgaccccaa ctaacctgtc aatcaccagc gagagctcat gtggccccgg tttcgtaaag gtctttggag agacattgtc 840 catgaccegg aagetettee agtetacaaa eeeggeagee eageeetttg teateteegg 900 aagtggcact ctaggctggg atttcgttgc ttccaacctt gtcgagaagg gcgagaatgc cctcgtcctg cactccggct acttcgcgga ctcgttcgcg tcctgtctag agacatacgg 1020 cgccaatgct acacagctca aggcacccat tggggagcgg ccatccttcg aggcgattga 1080 gcaggcattg aaggagaaac atacaagatc atcacaatca cccatgttga tacctctcct 1140 ggtgttctaa gcgacatcaa gacggtggcc aatatatgtc gcccagatca cccttaaact 1200 ttgggtgatg cggatggtgt atgccatgga cgctgcgagg aaattgcttt tgacgagtgg 1260 gatttggacg acgtetetee egcaageeea aaggeeettg getgeeetne gggeteagea 1320 tcattatgtt ctccggcgtc ttatcagacc ttaatgtccg caagactccc tcttqtca

<sup>&</sup>lt;210> 3225

<sup>&</sup>lt;211> 1274

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

<sup>&</sup>lt;400> 3225

catcacaatc gggctgtgct tctcattcaa ctccgctttg gtcatgctat ggttcgaatt 60 ctcatcgaga ctgctcaggg cgagaatcaa agcaaaaggg ccggatcgta aagccggcgc 120 atacggtttg ggtttccggg cettetttge eggttggeet teagtgteae cateagtaga 180 ctttcttttg tccgctttgg ctgttaatgt tttttagcat atgaactaaa gcaagccgtt 240 gacagaacct caccagtccg tggatcttcg ggcatgggaa gcccgtgctc cttgcaatac 300 teettgagtt tatttgtgag aegttegeat agtttaggte eeaggeegtt gagttgetga 360 gcttccgagg ggtgttggaa cgtcaaggga catgctttca tcgactcgta cgcctttttg 420 tacctggatg actattagct ccccttcttg gttttgacga ggacgcatca ggtgaacgca 480 caccytgact cccttggtat tacyctcccy ggcctggtcy agccactccc taatccaacc cagaagcagg gggtatagaa aagtatcgtc gctcatggcg ttgctgagtt gccacccgag 600 ctcaagtttc caaagtctct cacagacctc ccatacctag atcccacagc aagattgaag 660 cacgaagaaa tcagcccgcg ctcagcctga gtctctttgg ctgccatcac acggcaaata 720 gagctcaaaa acagcttggt tgctccatgg gagtcgcgat cgacgcgtgc ttccaggtta 780 ggacgcgaag tcacgtgcga tcccgctttg ccaatttcag gcagaaaggc aacaattgtc 840 ttatgattta cgtacttcat tgttagttta gcaacggaag gtactggtaa aggagcacgt 900. aaaccaggcc agtttcgcat agaatgcctt atctgcgaga aaaaatggtg tatactgtgt tgcacaacgc gacaggccgt taatgcaacc aaggttctac tgacgtcgct ccgtagggtg 1020 tgctggacct gctggttagt attcatacac agagttcaat ccatcggtct aagtcgtttg 1080 cacaataaat caactaagac ctatatgact aaccgcaggg ctgatattta tgtacagttg 1140 tgggaatctt gaattgacaa agaataggct ctccgagtgt tgtacacttc attggctcag 1200 agaaagttga tagtctctga ctgctgcctc aaacgagctg tcgcgcttca ttccgagaga 1260 1274 gattgcctga gaat

<210> 3226 <211> 6446 <212> DNA <213> Aspergillus nidulans

<400> 3226

cttcgaccct tcgactctcg acaaccacca cttaccgtcc ggcacatatc catcagtcgg 60

taagtgcgca ttggtacctt ttgtctgtta tcgtcgagat tcaacacagg gaaattattc tgctttcctt tccgcggaat ctacagcccc gtttctacca atacccaatc tactttgcca togacatoac accattagoa agttotgoaa acgacaaagt totaacgttt tggttoogoa 240 cagtacgccg tccactcgat cataatccga caagatgggt aagggaaagc ctaggggatt 300 aaacgccgcc cgcaagctcg cgaccactcg tcgtgagaac cgctgggccg atctgcacta 360 caagaagcgt ctcctcggta ccgcttacaa gtcttctcct ttcggtggtg cttctcatgc 420 caagggtatc gtccttgaga aggtcggtgt tgaggccaag cagcccaact ccgctatccg 480 aaagtgtgtc aaggtccaac tcatcaagaa cggcaagaag gtcactgctt tcggtgggtg ccctatgttt cctatttcgt gtttcggcat atttgcgatg agtcgagaga tggagcgcat gggattatgg aaaatatcag aaccctgaag aaacacaact aacaacactt ctcagtqccc 660 aatgacggtt gettgaactt catcgatgag aacgacgaag teeteetege eggttteggt 720 780 cgtaagggca aggccaaggg tgatattccc ggtgttcgtt tcaaggtcgt caaggtctct ggtgtcggtc tgatggctct gtggaaggag aagaaggaga agccccgttc gtaaacgaca 840 ccgtggcgag aggcgacgaa cgttggttca agattgatat ccgagaagtc gacggggccc 900 gtttccattg aacatcgggc ggtatggtct atggatctgg aatttatggt tcaggatgga tgacctgcaa aaaccgtagc agatactacg attgatatac tcaaaagacg gcgccatgat 1020 tttttatttc tctctgggaa gggccctaaa atcaagaaat ttctcaaaac cttggcttcc 1080 agacgtagge ggtegeggeg cattateaat getaetteee gettetttgt aacetgtace 1140 ctagtgcttg gctgttgact ttaagcagta taagctgaag gctgcacaac tcgaaccaat 1200 teetgagtgt ceetteatgt actaegaggt atgeatgegg catetaeget cattaggegé 1260 ctttattacc acgctggcgt gcataatcct actttaaaaa cggcgatcat gaaacgcttt 1320 taateettat titeagegta geetatagtg attitaetaa aagetgatat eeteetteeg 1380 gtagtggtca gacacgatac ggtataagta tgacggcgcg tgtccgcccc ttgacaagaa 1440 ttagttactt ccatgtgaaa aaggtgatga gagactcaca agttcgtgat ataaaggtca 1500 actaattccg cgggaacata atcatataac ggattttgca cgtcaatctg gtctaccagg 1560 tcgccatctt cgtagtcaat gactttgctt gagtcgccgt actcgattaa agattcgaaa 1620 tcgaaagggt acaccgggct gagcttgtat acaccgctaa caaccacaca tggcgtttgg 1680

tgcaccttgg ctgctcgggc aatgacacgg gtgcctgctg cagcaacgag accgccgttg 1740 gcgaggacgg aatgtgtacc gaggatgacc ttgttcacac gagacataag ggcgaaaaca 1800 gcggagtcag gtatgagaat caccgtgatg ccgtgagcga tcaagggctt ttggaacgat 1860 tcggtgctga ggatctcatc gtcgttggag gcagcaccac tgacagtggc atgggttgct 1920 tcatggttat tagggtatga ttcagcatgg atgacggtga acttccgctt cgcggcggcc 1980 ttgaggagga atttctgtac agtcgtcgac gaagtatgtg tgaggatgat ttcgttagag 2040 tgaatgtggt cgagcgcata ggcagcaatc tgatcatcca cctgtcccaa ttcatcaatg 2100 atctcgttga taccatccag gacttcggcg cggatatcct tattctgggt gtgcccgggc 2160 aggegteegg atggtgagee ggttgetgge gtaceeggta gtgaegttte gggttetgga 2220 tgagagagca gactgaacat agaaacggga tgggtggcta gcgaagatat aggttttgag 2280 gcacctctgt cggagccatg gaactcggac ggttctgcga cattcacatt aacctcactt 2340 tatcagcaag gcctgaagag agggcttacc atctccagca cgaggtgtct gcggttggct 2400 ttcggaaccc gcatcgctca aggtaaaatc cccgtctctg tcatcctctg cctcgtcacg 2460 gateaaccet ageacacgee gaacaatgtt ceegactace atetecetgg getgtgegge 2520 tateageegt etteecaege tetgeaegeg etegatgagt tttgaggeat egetegteet 2580 acacgcggat atgacgctgc gcaaaaggta agcagtggca gttgcgcatg atctagagtg 2640 teggatetgt ettegtttga gaagtetttt getgeateag tittgattga tegaaegeta 2700 gggacaattc gggacgcacg agatcagatt atcaatagaa gtatcgatgg gattggtctt 2760 cagagacttg agaaacgacg ctaaccctgg cgtcaaagga gcagaagtgg ccggcatagt 2820 gtettttgeg ataceggtge tattgtgtae aaggteettt tgeacateag teagegggae 2880 aggcatteta acettettaa ggegggtgte aegaggaete tggatgeagg aaagaettee 3000 gtggagccaa gtgagagtcg atctagtgcg gaggggtaaa tttggcagag cgggtgagga 3060 tgatggggag ggaattttgt gcccgccttt aagtctttgg caataacgtt acagtctact 3120 gtatggggag ctgcacccgc ggcggctttt gcttggccca accgccgccg tcattctcat 3180 agcaaatcga tcgtaccgtt ttccactgcc gactcttcat ccttactcct cttcaactac 3240 teceeteggt teaggettat tegtgeetee etacttatte aettecatee ggteaeteta 3300

cttgacctaa acagtetteg tgteteaget tgaaataage ttttgatete tgetetetta 3360 actattetee gtteegeeca ecagaaatee agggetggga ggagetgtgg tetgaageae 3420 gggctgtcaa ctggcgcatt gaggttggta cagactgaag acatctcacg tcctgcccta 3480 tegateetgt eeeteatggt tgeettgaee tgttegetgt aetttteget geeeetegga 3540 atgttccggt gatcgctgac ttgccgcgac tcgcgcccca gacacctgcg ccagctccga 3600 caccegtggg eggeattgga agatgaacte getgaatate etateggete gagteattgg 3660 ccagtcctcg cattcgaagc gtagccgaca gcgatctcac tctcacgggg atgtttctcc 3720 tgtaatcccc ccggacgacc ttgccaagct ccgttcatat agcgaaggca actttcatgc 3780 acacgatacg aatgagaaga ctcgccaaga cacgcccgaa ccaccggagg atgttcactt 3840 tgacgagcat acactggacg agaagtctcc attactacat ggactgccaa agagcccatc 3900 ctcactcgct actagaagct ccctaggtct aatcgcacag cggctcctgg aagcggtcac 3960 cgagacaatc aagttcatcc tggaaacatt ggtttcgcct ggggtgtatg tagctcagag 4020 cttcagagat gagactggga gctactcgcc tttggcgccg gtgagaaagc ttcgacgctc 4080 tatatctggt ccttcgtcct caagtagttc aaacacgcct aacaagtctg ctactcgaat 4140 ggaaggcaag cgacgctctg gctctgctaa aaaactgaga acccattcct cccgagattc 4200 tgttgcttcg agtacttccg agtcggaagg tgatcgccgc gtaatgaaag gtctcacaaa 4260 tagtcgacct cgagccgcta agaagacctc aagtgaagac tcggtatcag acgggacggc 4320 cccgcgaagg tccattcgaa tcaaactcaa taatgaggaa gctcttcagc gacaaaggca 4380 acgccgggcg cggagtgctg acctcgaccg gtcgccgcgg aatggtagtc acgactcggt 4440 cgacccagat agtttgaagt cgccagcctc accttctgtg cacctagtca cgcgataccc 4500 teatteteeg gtgeeteete gaeegeteat eeegtetege eteeegteat acaeggeeae 4560 tggcagaaac gccaggattc cgcagaaaac gctcgtcctt gacttggatg agaccctcat 4620 ccactcactc gctaaaggtg gccgcatgtc cagcggccac atggtcgagg tcaaactagc 4680 tacaccgatg acgactgcac teteacetgg egeteeteet actacteteg gaceteagea 4740 teceatecta tattatgtae acaaacgaee teattgtgae gaatteetae geaagatete 4800 caaatggtac aagctagttg tctttaccgc aagtgtgcaa gaataagccg atccagtcat 4860 cggctggctg gaacaagaac cggaaaattc ttcccaagcc cgggttcctc ccgggccaac 4920

cagatgttcc ctttcccgaa acgggccgcc ctataattaa aaggtcctcc agcctcgggt 4980 tgacgccggt atcctgacgc ccgggctcta tgatcttgga caacagtcca atgagttaca 5040 tettteatga aggtaggetg attatatttt ggtecaatat ettgagegaa taetaacace 5100 aatccttaga taacgccatt ccgatcgagg gctggatcaa tgaccctaca gataacggcc 5160 tectecatet cateceaatg etagaageee tacaataegt caetgatgte egggetttte 5220 tagcactgcg tagaggagaa gcagacgctc tatgatcaag cagcttgtcc tcgacgcaaa 5280 gccatgccta gcttatactt gttacccttc tcagctctga tatccgcact gttataccta 5340 acttacctaa tgcattgtaa agagtccggt ttctttcttg aattggcagc atgccgagtt 5400 tttaqcatta caattatcat tatcctccca tacccccttc cttgtctatt gttggcttac 5460 tacattaatt ttatctgett tgeetegeet ggaatetteg etgeacetet eccetegtet 5520 cctcagatgt gtattactgc gccgagtaga tgttacttgc acgaaacata aagctaacga 5580 ctgttactct ccgcatatgc atgcctgttt actccatacc aggttaactg atgtatgact 5640 aactaatatc caccacacgg tccgtaaccc gacacaaaaa taagtattga aataaaattt 5700 aaggcatatc gaaagccttg ccggtcacca ttgtatggcc aatccagtat cgtttgcatt 5760 atccaggatc tggctaaata agaaatccta gtatttagta ttcgcgggtt ctacagggcc 5820 cggtatgctt ccaggggctt ctacacatac tagttccgat ttcggctaca agggcacctg 5880 acgggaaacg tttgcctgat agggaaagct aacgctaatc tcgggttccg aggcttctaa 5940 acttggagac cgcggggcta agactacaga gtccgttcta tacgccttga taataaggta 6000 tgggcatgct atcgccttgt caggtattga atatgaatgt gattttgttt atattttact 6060 atgttatata tctaagggta tagcaatcac agaccettag cacgtttege ateggeaatg 6120 gcctccttga gggctgcaat ggccttctca atgtcatccc gagcggggtc cataatgcta 6180 acacccatgt gcccaaagcg aatgtacttt gttgcaacct ccttgtgcag gcctgcagca 6240 aagataactc cacgetteag cagaceagga aggacatetg geggggeeag tecateagge 6300 agccagatgg ctgtcatggc atgagcctgg ttctcgacct tggaggccag ctgctgcaag 6360 cccagttctg cgacagcggc cttgacgcgg tcggaggaaa ggcggtgtgc ggcgaagcgc 6420 6446 tctgccatcg gccgggatgt ggtttg

<210> 3227 <211> 2732 <212> DNA <213> Aspergillus nidulans

3227

<400>

tcacgtcctt tctctgtatg accttcttgg ccggcaacgg ccagcccgtg ctccctactt 60 ctccaaccaa tgacggaatt acgaagcaag ctcgtctctc cggtacgcca ccgaacgatt caattttccc aatcggcttc ccgtactcaa tgagcggcgt tccgtgcgcc agcgccqaqa gctgcaaccc gctcggcgtg acaagcgggt acatcctgat ttttggcacg tcgcccgcca 240 caaccgaggg cacggactgc tgtaagtgcg agtagattat atactgcggc atttccttgg 300 gtgagagett tgctaggaca gaagttgggt gcacgaagac agcetttteg ttgatgtetg acgtgcttat gggggcatca cgggaccgga agagtgtaat gtagggcaca tcaattgcgc gctttggtgt acgggccatc tccggtggga cgggggccaa atccgcacgg atggcgacgt 480 tgtcaatgaa gcccgctgtg acaatctgtt tgagtgcttt aacttgtttg tcgcttggtt ctggtaatcg ggcttggtag gcttcaacga ggcccgggtt attggtgcgt acaatatcag tgagctgtcg tctaagctgc gtacctcctt gagtgccttg gcgcgcagga acattctgtc 660 gcagaagctg tcggcgtccg aagaggaagc atacccgtac gcgcaaattg cggagaggta 720 tttaagagcg tcagaattgt tgtcaaattt gctgaagagg cggtgcgcgc gtgcgtagtc cttgtgtcgt ttctcacgtg ctgtatcttc aagacggtct gagttcttat aaacgccatt atetteattg tetteettge etggatgggg ategatttga tteteeggta egaagaggte 960 teceaetget agageggega caagggeaat gaegtaggge atacageegt gttggtggee aacgtagacc attttgccga atcggggtga gagagggtat gtggagaggc tgttcccgac 1020 aggtgtgatc ttgccatcgg ctgtgagagc gcctagattc ttcaaaagtt tctcggcttt 1080 tgctagaccc tgacggctgg gtggtgtagg aaaagggaag ttaataacat tgtggagacc 1140 catgetette atetgeagga caaceceete gatgggegte egeaagattt eeggatetgt 1200 gtattctgca aactcgccct catatatagc agacgaatac agtctgtagc agtggccagg 1260 cccagttcga ccggcacgac cggcacgctg gtttgcactg gccttgctga tccagttgat 1320 ctgaaatttc tgtacccctg tctccagatc atactgtttc tcctttgcac ggccgcagtc 1380 gaaaacatac cggatgcctg gaatcgtaag agaggtttca gcaacgttgg ttgctagcac 1440

gataaggcgg gaacettcag gtggcggttc gaacacgcgg agttgttcct tggtggggag 1500 ttgtgagtag agaggcaata cgtgtacctt tgtggatgaa tccatggctt cctcaccctc 1560 ttcgccaacg ttgaattctt cgtcttcctc ggggtcatcg agacctgtga tctccaggtc 1620 gctgtcgtcg tcgtcgtatc cgtaggcgtt ggtattggcg gtatttgtga tgtcggcttc 1680 gccgatttca aggtcctctg cctctagtgg tgcttcgttt gccgaaattt gcactttggc 1740 gttagtcacc tcccctcgtt gcgttggctt gaaggcctgc ttcaaccgct tggagagctg 1800 tctaatctca ttttggccgg tcaggaacac aagaattgct cctgggggga gtttacggtg 1860 ccctcttgag accttcctaa aggcctcttc gacataatca cgatgcgtac gtcgggagaa 1920 gtggatggtg acaggatact ggcgtccctc agcctggaca agaggtggcg ggccttggcg 1980 gaagagacta gcgttctgtg tgaagtcgga gatgcgtaaa gttgcagaca tgattaccag 2040 tttcagaggt ttgactgatg ggtcttcttc gctcatggtt ttgcgcaagt cgacgatgcg 2100 gcttaccaat cctattagga tgtctgtgtt gaaccctgcg ctcgggggct ttattaataa 2160 cgatgatgga gtacttggta aggaaaaatt ttcagcgatt ttgcgaatta aaataccatc 2220 ccgcatgaac ttgatggctg tcttgcttct tgcagtggtc tcaaagcgaa tttgataaaa 2280 actttggagg aaaacggctc tattaataac cacttctttt gcaatttact gggagaactt 2340 gcggggtgtg ttgcgcccaa aaacccggtt ccccgttttg tgttcctaac cgacttaaaa 2400 aaaatgttgg ggcggttgtt tacccttttc tggggcccaa atataaggaa agttttttgt 2460 gtcataaatt ttttttttgc cacagagggg tgtcaagcgt ttttattatt tggccgactt 2520 ataataaggt ttcctccgtg gcccttttgt taaaattatt ggaggtttcc cctctaatag 2580 agtagggtcg gtgagggaaa ctttatattg ttagaacaaa tattttttt tgattatttt 2640 gttctgtaat acctatttta tattcttatt attaattagt cattaactac ttttttcttt 2700 cgtaattata tttattttct aaatatttct tt 2732

<210> 3228 <211> 2367 <212> DNA

<213> Aspergillus nidulans

<400> 3228

cttgcagtgg gtgcgattat ttcgcatgat gtagcgccag ttttgtactc gtgggccggg 60

ctgttgcaaa tctcctgggt ccggtttagg gagtttgagg gcgagatcga ctgaatcgc aatgtgattc ccttcacctc ggccatgagt cacgtactag agagcgtccc gcaggattgt gagggacgag gactcgaagg gaaagcggct gggcagatac cgcaggagcc acgatgatgc cgtgaaacac atcctcgttt ccgaccacag attcatcttt gtgcatggcc gccatatgaa 300 cggcgcgcaa gctaaccccg taccgttggc ccgttgggaa gaagcgcggt tgttccgcac ttggccatgg ccgaaaccaa ggtcgataag gccggatgat gcagttcaga tttgcacgag ggatttttct aaaccaataa aatgattcga ggtatgtcgc agatggagat caagagatgc 480 aaagcaaaag tggacccgac cagtcgggtt tagctggaga tttgtcactt tagcgacttt 540 acggagtact actggccacg atgctgaggc tgcactctgc agccgctgca gatgaacaaa caaagtatca aactgcgcag acaattatgc gagagtactt gtcatagttg ctgagctgga tccgtaccct ggctcccact gcatatgcat acttgatatg ccatgaaagc caattttttt 720 tttggcggct tgaatagtac cgtcgaaggg ccggttccgt ccacagcaaa accagcccaa 780 gtgacaattc acattatcaa ctcctcttgg gcctccgctt atccagaagg actcgtgacc 840 agaccggaga gccttgaaac ggacacaaaa tcatgagaat cgccagaatc gcggaagtct 900 ggagtctagc gacccatatc gccttactac cagggattaa agggattaag catatgccgc tcaatctata ctataccgca catttacaga aggtcagtgc gacgataaag aaaaaattac 1020 tgtttagggg caattttaag accetetaag accaggtatg aatttgeegg ceaettgeea 1080 gccaggggaa gccctcaatg aacccgagcc taccccggga gtctgacccg ccgcggaaag 1140 atcettgtte tttacaaate gegtggtteg aetgtettte eegacatget aacegaacae 1200 gaacttacgg ctggctcgaa tcctggcctt gatttcgcga ttgccaaggc aattgagctc 1260 agtcccatca gaaaacacaa actacgcaca cttctgatgg aattttcaga gtacgatggg 1320 gcccaggtgt ggatgagact acgaatcccc cgttgaacag acggtgagag tgaacaagcg 1380 ttaaggetea agaeteagag etgagteeaa getegaaaca aatetggage etagagtgga 1440 ggactggcac agaccaacga ataacaacgc catatccgcc aaagatgctg ttcaagcttc 1500 ggctctactc tcgggccaag actgttagac tgaacagttc acagactaaa attgaaggat 1560 caagetgett atecaacaga tgateacaac gegggeatgg cegggeggee etacagtaca 1620 actggatatg atggtattac tcgagagtac ttctaccctg catgctgcaa cagctgccga 1680

geteggttge acttateage thacatggaa thgetggteg catatgeata ataaaacete 1740 gratatecac ctegetettg ggateceget cetgetgete aceggtacgt acacettaga 1800 cagetetget atatgeatta tgggcatect etectateaa gatacetatea tggcatetta 1860 tagtggegete tacagggatg etagtttage aceggtagtee acttaggtae cagaategag 1920 gttaataata gtaactegge tetteaagae tttgeggtet ggatagagtt geegtaceet 1980 acatttagat ateagactgt ggecaagtea egggtactgt aaaagegett ggaatggete 2040 aggggaaacg agaceecaag geegatttg agcacagtga gggetggaag gttagaceta 2100 aceagageaa gaacaattet agetggtege gggetggtet egaceagete gategetegt 2160 actaceeca egeetatacg tacteecgag tatategga gegteeggaa tgategatee 2220 acgateacaa agtegeagee egeeatetae acaaatteeta aateggaacg tgatgttgte 2280 teeceetgeea gteagtgte tgatgatat ategeae 340 gateecetata gtagtgatat ategeae 340 gateecetata gtagtgatat ategeae 346

<210> 3229 <211> 533 <212> DNA <213> Aspergillus nidulans

<400> 3229

ccaaatcgta atatacttac tttgacactg tcaacgcctc gtctaccgct gcagttacaa 60 gccttaaccg cggaaaccgt tgcattatcg tctcgagccc tttcttcgac gcaaccagat 120 tcacaaagac gatatcctcc tcgcacacgc ctttctcttt cagcacgtcg atggctttta 180 tggcggaacc gccggtcgcg agcattggtt ccaggattaa aacggctggc catcagacat 240 ttcagttagg caggtaacag caagttcaag aaagggacat acactgctcc gcgatacccg 300 ctggcagttt cgagtacaga tggacaggga gactcgtttc ctcgttgcgc tggatgagga 360 gcttgcccat gcttaggttc tcgctggaca cagacatgat agatgggtca gcgaatgaaa 420 caaccactgt atacctcgca ccaaaccccc acctgaccaa aggtcgtaac gtacccgtaa 480 gcccttcgta gggcagtttc aaagctcgcc cctgcgcgaa ggatactcac gcc 533

<210> 3230 <211> 1475 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 3230

aaacactgga ttgttgagtt catataacag gtaactccga aatttgccaa tccggtgcgc ggaagtttga gacgattaag caatgagttc gacgtgtaaa gcgcgtgctt ggttgctgaa ttttgtctct gcagcggcgc ttgtatctgc cggccatccg acacaccgct gtagctggga cgcggaacag caggtggagg tcttgaagga gcaataggca catgagacgc atagtcgggg 240 gtcaaaggtc tgggctgggc tgttatcata gattgctgaa tattatgagg ttccgggaaa 300 cggcgcagaa aatcctcgta cgaacgaatg aagggggaga tgggagttcc tgcttgttgc 360 tccggctcgg gctcctctga gaggttatcc tctccaagat aggcacttgc gtcaatctct 420 tctgtctttg acttctccaa ccactccgta agctcatctg ggttcaactg tgaaagtttt 480 cgaagcctcc gctttctgat ctccagactg gagttagcgc tagcatatgt cgggactcta 540 600 ccgagacggc gtcccggcct cgcaacaggc cgcctggttt gcaaagacgc tattacagca gcggtagatg atgtggccag cgactgttgc cctaagagat ccatccaagc gtcgagtcct 660 cccgctagaa gcataggtgg ccgaccatcc ttcagaggtt tgtaggcatt gaactcgtgc 720 agtgtatcat acaacgccct caggtgagac cctgtggtcc cccccggtgg gccggcaagg 780 tagctgttcg acctggtact ctgatcgtag tagaccacca tatcaaactc atttcgcctc tegaacaacg actgtteatg etcaggagae accaceaace geteetcaag etettetgeg 900 gaaacgttct cctttaatgc cacgggctct atgcatatga tcgatttcgc atatacatgg ccgctgtcaa aatcctctcg ggagcggacg tcgatcagca atatgctata acgacggagg 1020 tagtccagca actcctgggc gctgatagta gatctgtgcg gtaaatcaag cgtactacta 1080 ctggcgccct tcagcgcatg gacgccgttc ggtgttcgag acctataagg attatcatcg 1140 gagccattag gactttggct gccatgagga gaatttgcaa gatgggaata tcgtgcatta 1200 ttcggacgaa agttctctgt tgaagttctc ggcgggttag acggaggctg agaaggtacg 1260 gtgtatattg antaaaatga attaagagtt tactgtggat aagattagac atcttataaa 1320 gaagaatttt ttgacgatat ctagcctggt ggtatggacc agggcctctt tcggaagacg 1380 ccgttatgaa tcgcccttac ggaaataggg aaaagggacc ccccttgctg cgtactatcc 1440

<210>	3231
<211>	1502
<212>	DNA
<213>	Aspergillus nidulans

3231

<400>

ccgtatgact ccccagctt ttcttcctct ttgctccgtc ggcttcacgc cttttcttt 60 tatcggcgat ctgatccgta ataatcgtat ttcagttacc acactgaagg tctgagcaaa 120 cacgcttggt ttgcaacccg ccgaaactgt caatgctgtc tgtcacagct ttatatgcag 180 ttcaacattt agaatgcgat gctttcgtga taatactctt cttatacagc tcggtcgaat ctgactgatt tatcctgtca gcagacaccg agctggctgg aaacatcctc tgcagcggct 300 gatcgccctc cgcgtcatgc tcgtttggga cgtaaattac aatggagatc tacttcgaga 360 ccattgctgt.acctagaaat agattacttt accagaaacc aacgcttggt gattaagcct cccctgacca acaatggatg ctcatgaaca caatgaccgc tcgtaaaatg catagaacgg ttcctgtttg ctgcatctga accaagacca aagctgattg agaagtaaga accaagtcgg cagaagggtc cgttgcgttt cgaccgcggc ttttgggcag ttggcatcag cgtccataaa 600 cccctttgat cctaagccaa aactcaacac tgaagcctac gcatttccag ataaatcata 660 ggcagtgtgc caattettte cetaggtete aggagttggg aacegeataa tateagecag 720 gaacggcgcg aagctccgag aaggtgcagc gcactgcatg gcggcgaggg ccaagcgcct 780 acagggetea aagagaatga gatgeaggte gecaatatae eteteateta ttegeaeett 840 tgtttgaagc taaatctctc cacaaacatg tcccacgtag gtgatttttc gggggctttt 900 gtcatatect actetgatae tactetgtge etggettace ceagaegeea tactaeagea ctgcggagca ggtcgtacag gaactaacat aaatctcacc aaatgaaact ccagcctttg 1020 catctcgtgt actcccaaag tggctgctga ttctgtaatt ttcctacttg tttccatcct 1080 gatccgcgta ggtgaatttc tgcttcctgc ccgttcactc gggaatctcc aagacgtaac 1140 gaccegeaat ettecettge eetgeattee aaccaceate ageateaata ttaaegtega 1200 ggggagaaca caaaagaggg gaaacacacc catcaactca aaaatctgtg gcaaatcttg 1260

cagcggtgcc ttcttgaatg gcgccttgat aaggcccctg gcaaagaagt ctaacgcctc 1320

aacgccgtcc	tggcggtttc	cgacataact	tcccttgatg	ttgatcatgc	ggacgacagt	138
tgtgaacacg	ggtgccttga	gaaatgcatt	ggctggcaag	ctgattgcga	cgacggagcc	144
gtgggagcga	acgtactcgg	ttgcttgttg	gaagggcttt	tcggcgacgg	cgaggaggat	150
ga						150
<210> <211> <212> <213>	3232 512 DNA Aspergillus	s nidulans				
<400>	3232					
ttacagtcaa	ggacactggt	caaggtattg	acaaggagta	cttgcagaca	acgtcttcaa	6
gcccttctca	caggagaacc	ctctctcacc	cggcagcggc	ctgggtctca	gcatcgtcca	12
tcaaactgtt	gtctcgctcg	gcggcagtat	cgatattgtc	tccaccaaag	gcaccggcac	18
agaggtcaag	gtccgcgttg	acctgccacg	cacgcccaaa	tccgaggcaa	caaatggcga	24
ccagaaccaa	caccacaaag	cagtgacgga	gaccagggag	cttgttcggg	gtaaatccat	30
cggcctcgtc	ggattcggta	caccggctga	gcacaatgag	gaagccctga	ctctgctccg	36
ctcctcgctc	cagcgcatgt	accaggatta	tttcggtatg	gaggtcggct	ttgcgtcgcc	42
cggaaatccc	ggctcatttg	acatctacgt	cgttcgacag	acatacctcg	atgtggccga	48
tgaaatcttt	cgcaacgtcg	gtacagtgca	tg			51
<210> <211> <212> <213>	3233 1468 DNA Aspergillus	s nidulans				
<400>	3233					•
gcctgtacgt	gatcccattg	cactattaca	gcgctatcta	acaatagata	ggcaaaagac	60
aggagatggg	tttatgcttt	tataacaatc	taacgctggt	ttccgaggag	gccgcgctgc	120
tacgtccgat	tcacgccttg	caaagagcta	aaagtgggca	gcgcagtacc	cgtagctggc	180
tttgccgcag	tttccagacg	gctttgggtt	gccattggct	tccaaatgaa	tgattcacac	240
attgttgctt	agtatctgat	tctcaggtcg	accaccttgg	cagatctgtg	gcgggcgtct	300
at aanaaat t	atasaaats	<b></b>	h = h = a = a = b = -	aaaaa+aaa+		261

tactgcgacc ttgctggctg aaatagtagg gatgaataga cgcqtqcqat gtggataatc 420 cctttcagga cactttggat ttttaagaag caagcacgca gtcacqtgtc ccgcaacatg ttaggagggc agcttaaagt agtaggtgga aggcttaagt cgatatatgg aatttttata 540 aatcgagact atccatgcac agtatacaag aaaaacgctc agaggcaacc agaaaataaa 600 ctacctcttg gaaagcacgt tcaacgcact gcccgtcaga atgaaagaag actgatccgc 660 actcaaggtg tgcttcacag gaataacaat ctcctcgcca ctcttctttg taacacgaag 720 cttgacetea ceettgeege egttetteag tgtetegtae aggeeetegg tageaacgae 780 atcgcaagca tcaatgcggt catagtcggc cttgtcagcg aaggtcaaag gaacaacacc 840 ctgcttcttc aggttggtct cgaggatacg agcgaaggac ttgacgagaa tgactcggcc 900 accoaggttg cgtcgctgaa gagcgttgag ctcacgaatg gaaccttcac cataggtctt 960 tacagaggeg accageetet egtggtettg gattateeat tgtgeageta gateaggatt 1020 ggcgtgcttc tatccagcct cgaatatgtc acagattccg taacctggtg cgccgtttac 1080 agcacaatgg tgggcagcgg cccagaaact ggtctcaaga cgctttaatt atattcgttt 1140 atteaatece egtettegee tateettatt acceageett eecaaattat eeeteggtee 1200 atcgtacctt caccgtataa gaacggttcc aaccttaatc tagaaagccc atctttatat 1260 tttccttgtg cccaaactcc aatccttttc tgctcgcctc catccttctc aatatctcct 1320 tcccgttttt ttccaaaacc tctcaaccat atacccttca tttttttaga agtctacacc 1380 attettteaa eteecteeat tgacetaate aatetttgae eecetaaate ttttatetaa 1440 aatatgtctc ttttactttt cctcccc 1468

<210> 3234

<211> 889

<212> DNA

<213> Aspergillus nidulans

<400> 3234

ctcattttta gtccctgccc cataaacgaa taagctatcc ccaggcgcac tttaacccat 60

tttagctcaa tcaaaaatcc cgctgcgcac atcggaaccc acatcccccc tcacaaaccc 120

aatcactgtc cccgtccaga ctagaagccc gggcgcagca aattctcacg ctcattaagc 180

ctacaaccgc acatgattgg cgcggattga tcatactcct cgaccagctc ccgcgcaact 240

gctacagagg cactgaggcc gtactcgtgt atacattctt cgacccgata tgcaggttta 300 tegegteeeg ggetttggaa gaggggatgg eegttagaee egaaataegg tategeeteg cgctaaggca ttggttttac ctccctttta tgcattcaga ggatcttggc caccaagaac 420 ttgtgctaag gagttaccaa gagatggctg atgatattcg tcggcttttg gatgaaccag 480 cgcacggggt aggcgagaag gaattatctt gccgggtgat cctggcgagc aatagggaag 540 ccgtcgaggc caacctggcg caaagcttca agtttcagaa ggagcaccat gatatcattg 600 cacggtttgg acggtatect taccgaaatg gagtgetggg gagaactaca acgeeggagg 660 aggaaaagtt cctcagcgag acagacatat ccttcggtta atgctcacta cctcttttta 720 780 tatatacaat ttaagagata tttgcataga gatacacgcg tatcataaga tagataacca acctacttcc ttgaccagaa cgcctatgca acgatcctcc acagccttcg tcctacataa 840 889 tatgaagacg aactgagcaa gaaagaccgg tagccacagt aacaatgta

<210> 3235 <211> 1312

<212> DNA

<213> Aspergillus nidulans

<400> 3235

gattaaaacg gaagctatat acgaccatca gcatcaggag caggcacacc ctcatgggat 60 acceggtate gaggecatag cegtteceat agetagaega aggeceaggg ceggteggeg agccccaagc gtctgagccc cgactacttc gcctcgttag gttccggatt ttcgaggaga 180 acgactcatt aacgctgcgg ttccttcgat gttcaaggga catgcggcgg ccaatagacg 240 gtctggtctc ggtatttgca gtattgctgt ttagtgccgg tccagcagtc atagcccgtg 300 ggagcaagcg gccgagattt tcattgtcaa tgacgatgtc gattgtcccg gaagattcac 360 420 gctgggaacc cgtgcccgaa agcgaagcca tcgagaccgg ggccggagga ggtggtggcg gggtattgtt gttcaggtgt tgcaactcag ggagaattgg cggcaacgac ttttcaaaag 480 540 cctcctcgat gttcacagta acaggggagg aaccataatc atgacttcca ccggcggcgg. agagetegeg egagetttgg eggegaeggt ggatgetteg gateeggtet gaggagegge 600 tacgtggaag attggggttg tagtgggggt gcaatggcat gtccaagggt cgggatggag 660 gctgcacttc gggaactggc acagacatgg accgcgggat acgctcggct tcgcttgata

tettgcgtcg ctaagaagga gtggtgcggt gtcggtttgg ggaggagctg atggggagg 780
aggcggagga ggaggcatgg gctcagactc agaaggtccg ctgtattttg gatggcgcat 840
cgcacgagga gttgcaggaa ggcctacagg cccaccggaa cgtgacgagt tggactcgga 900
gctactggga tagtccggcg aagtctttgg cggaagcacg gtgcgtcccg gcgtgcgagg 960
ggtgaatgac tgcacggaga aaggtgggct ctctaggaca cctcgagtat attggattc 1020
tcctgagaat ggaatgttgg gggcggacgg attgcgcga agcgagggg gtctagcttc 1080
aagttcagcc gctgccagtt cctttcgcct catttcagca gtagcagggg aaacattatg 1140
attggcctca ttaaccgctt gtggcttatc agcaggttcg ttgacagcag gattcgtct 1200
atttgttttg gagtcggcat cttgacgagt tctagagcct ggtcgggtg gacatccgtc 1260
agcaaagaag ttacgtctag acgcggatgg acgactgctg cgactccggt ga 1312

<210> 3236 <211> 1305

<212> DNA

<213> Aspergillus nidulans

<400> 3236

cttttcacag cactttataa tttggtcagc agggtcgtct tcgcgcacta gcgggtctct ttaggttagt gtcgtcggaa gctaaacagc ctattttggc tggaccttgg tattcacatc cacaactgac ctatgaacca gatcccgctt tggatagctc tcaaaggctt ggctaaagta teteageage taggeaagte gtgeeataea atteettgae tegtatgaea agetgtgtet 240 caggccaatg ttttattctt acaaacatca actgttctac ggccaccaga atgccttccc 300 gtacttgagc ttacccactt gatgcggaca gcaacagtgg tcattatatg ttcacaatca 360 tagagtagct aagttcccga tgtacgaagt atatgtcgaa gtacaaaaat gacgttagca tgattggtac caaggtccgt gcccgctttg tctccattgc cctccagctc caactcccca 480 teacgactge tetteetetg tetetettee ggtagtttta ttgtatetat ttatattatg 540 ttaaatgett tggteteett tatteetata eeeggettet gatttettte eteceatteg 600 cetectgtga caetegttgt atgattgtge aaceggatae tetecteage ttacaageaa 660 tgcgagtttc ctttccctgc ctataaaggg gaatttttat attattctac cctatactat 720 ctctcaacga tataattcca atatttttt gcgtaccttt ggcccaaacc gttgaccatc 780

cgttgaatgg cggcgtccac actctcagcc ggcggaatga tcgatccatc caaacatgcc 840 gaatacccca tcatcctggg cgaacggctg gcaagaagga ccgacaagac atattcacag 900 ttaataaaca ttcaatataa ttacaagccc aagtcggcga ccccgcagca gcgatctatt 960 atcaccaact cccctcactc ccgggaccac tttaacctaa cgatcaccga tcaggctccg 1020 aactcggacc agaatgtcct gacctactcc taccagggca gcgttgaccc agcacaaagc 1080 gcatctgact cgcaggaaca tgagctagta ctcgtattcg acgcggcaaa gaaagcattc 1140 gtgctggaac ctgtggctac acaactcaac ttcaatcttc gttcggcccc ggcaaaaacg 1200 caaaagcagt tgatccagca gtatccccag cttaggactc tacaggaaga ccacacgtct 1260 ggagatgacc gggcgcccga ccaggcgagc ggaaacgacg atggg

<210> 3237 <211> 1703

<212> DNA

<213> Aspergillus nidulans

<400> 3237

tgattgcatc cttcttcaat ccaaaaccgc tcagaaaccg tgcatagcat atttgatcat 60 acgtaatatg tgcatattct atcaaaaaat tagaaataac agatacggcc ttgatcgtct 120 gctgtatgcg tagtctttcg atggaggcgc cctaacgaga cctgatatag acctgaactg 180 cttagtcaca gtttgcacag tttgtactgg tcaaagttgt gtcctttgcc gccataaaac 240 ccatcgttat agatacctta agaacctacc gcatctccct caacaaaatt gaacatgaca 300 ttgctgaggg cgcctcagcc gtttcaatac gctagtcgtg tatttacgtc tacatcctta 360 tecacaecee gteatgeata tettaeatat agtegagtae gatetttgae etegaeatea caccaccca caaaaagcca tccatccttg tcctcatcaa cgtccaatac cacatctgtg 480 gaagaaaatg acgccccaaa aagccaatgt acccccagg cgtctcaaca catcccctgg 540 tatetteagg aagagagete agtaeetgea gtgteegagg teaeettaea ggagaaaete 600 ccagagetee eggaaaacee acceaaaate ttgeeggaac teetagaata catetttaaa 660 720 gacctcggcc ttgatgagct caagttgatt gacttgcgac cactggagac gccctcagcg ctcggagcga acgtcattat tatcattgga actgcccgcc agggcaaaca cttgaacgtt 780 tcgctgaccg tctgggtcgc tggcttcgga gctaatacaa gttatcgccg tatgcggacg

gattgttggg aaggaacgag ctgaagatta agcttcggcg caagaaccgc agagctagaa ttgctagccg aactggtacg atgtttgatg ataaggacga cgggattact acgggttgga 960 tttqtgtcaa cgcgggtgtc gtggaggagc atcctgttga ggagcgggtg gaaggcgatt 1020 ttqagggttt tggccctctc gtggggggta cgagagtggt agttcaggtg ttcacggcag 1080 aqaagagagc ggaaatggat ttggagactc tgtgggaagg aagactggcg cgagcacagc 1140 gagagagaca aaagcacgcc gatgccgcca aggatgacgc acccgaagag gttcgttatc 1200 ccaactcaat aagtccgtca ccatctgact ataaatcgcc caatgttccc aggtcgtgga 1260 tcagtcttcc gcatgaacaa agaagacagt ttcatattag aagtctgcgg tcattcgcgc 1320 gcccggcaca ccatgctgtt tttacgccac gttttatgtc ccagaatcat acccctgctg 1380 aacatgccat cgtagggagc gaactgtctt ctccgactgc aatgctcttg cagtatatta 1440 cgactatgcc agatcagcaa ttgatgtctg cattggggga tagaccagat gacgagagtt 1500 cgaccgactt cctacgactt ttccaccaca gtctattagg cgcttcaccg aatgttctag 1560 ccttggccag actggagctc ctatgcttgg cacattccag agggcataca ggaatcagca 1620 aagaaagcgt acatcgcgca ttcatgggtt gctgcttctc cgcctctcat ataccagatc 1680 1703 gtctaatcaa cactgtagtt gat

<210> 3238 <211> 6792

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3238

tagagacttg tgtcctagtc cgctcacaac agtcactaca aagcaagtca ttctgagata 60 ccaggaccat tgatttatgg caccactcgg ctacagacca gagacacttc gaagggtatg 120 tcgagcgtgt gcgcgcggca agcgacgttg cgaccagcgc tggccataat gtagcagatg 180 tctggctcgg ggcataagtt gcgaatatgc caacatccct cttacgggaa atgacgcggt 240 ggtagctgta ccgtctgacc gaccagcact cagaggccta gaccgttcgc caccaaagac 300 aacgactact actgcggcgg cggcagcagc agctccattt attaccccta ccatccatta 360 tcctctgact atggaaatcc ccaaagacta cgggcagagt accattgccc tgcttgtaga 420 aggtgtgtcg tcaatgccac tagaattcgc gcagaatatg aaaacgcaca tcatccactc 480

tgggctctag ccccgtggtt cacgctccga cactctccca ccggcgccga tccgggacat gtacgccgtt tgctaactgt acccgcgact ccacagtacg acaactttcc ggatgctgct 600 acgacagaag acgatgtatc tctacagaca agtcctccgc gccgctagct ttgaggcggc 660 actogoctog gcacaagoco tgotgotago coagtgoatg otoatogota tagagggtoo 720 cgatgctccc ttctcagaag cgactagtgt aatgctcctc agtctcggcc agaggctata 780 ccagcaagct ccaacgcaac tacgaagtag gctcagtccg cgacgcgcat ggttgtttgc 840 cgagagcgtg cggcgcacga tcatcgttgc gttcgttctc cggggcgcat actcgctcaa 900 aaageggaat tactetgeee geacteegtt cattgattee etacegtteg acatgegtae 960 cgcgctctgg gatgccagtg ccgaatcgtg gaccgatgca gagggtgact cagctgactc 1020 gattgtctcc cttcaccagt actccgggat gctggagagt gggctcatac atgggatctc 1080 gccatttggc gggttgattc ttgctgcttg caggggaaag gccattgagg aggttgcata 1140 tccgtcgttg cctctcgcta gatcaggtca gagtatttga atcacaaacg acccgtgatc 1200 cgacagetee taacagtget gtetetgtgg gtegateatt atttgetgeg etectteett 1260 cgatcttgac cgaccaggcc tatgttattc gaacactggc acccatcggt gtctcgttga 1320 cgtatcagga atctctgcgg ctcgtgtatg tttcaaccac aatcatgcat ttcccttcca 1380 agtttatgtg ggttgacctg gctctcgaag gatggctgtt accatgtggc cacaatgttg 1440 agggteetge ceacataegt ggteacatat ttaagaagea ggttggttte gteaaaaget 1500 ccaagatatc aagatgcatt agagtgcaag cgtgaacata actggctcta gttatgtgtt 1560 tgcccggctg ggagcttatg acatgagcca gggatggttc attctcatat ggcagatgag 1620 gacggctcag ccgtgcgctc ctaaggggat taatagtcgc ccgctctaga caaggqcqqt 1680 attagtactg ggctcggatc tgatatagtt gaaatcacat gatgtattca tacgcaaatt 1740 tcatgagcgc aggtttgtgt taggcggatg tccatggaat ttcttacact cctgagcctt 1800 taggttgtcc atttagtata cgatggcttg caggcctaag gcagtatagt agacagctgc 1860 tgacatcact attggccata cacctggtaa tcgtacttga gtattcgcct gcaggatgaa 1920 tggcctcgcc tggagcatat ctggggagca ttatcgcatt tgaagtcaat atacttcttc 1980 agtettagga gtgetgagge tacaggagta tecceagate tagatggaet etgegeegte 2040 agcattetta catagtetae tagteetteg actaaaaggt eegetegage tetacettga 2100

tgtcgaaagg gttaatgata aggctgtaat ttaagggtca gtaaaacgtg aagagcccta 2160 catgttttac caaacgccag gattgggctg ggtctggtaa cctgtgaaaa actcatgtct 2220 gaaccttcac tggcactgcc ggctaattca ccacagcgcc agagcaacaa tccgtctctt 2280 agagccaaat gtggacagcc ccagcctgtg tatggcgatg tcaatctggt acatgtaggg 2400 attctaggcg tggaagacga ttcgctaggc catgttgttt agtgcattat tgtatttact 2460 atctcgttat atctagcatg ctatgtttta ccagtgattt tcgttcatgg gaaatattac 2520 ttactcagaa gacaggcgag gcaacatgaa gaaaatcata ttaattagct cccagatggc 2580 tctgatcgcg tactcccggc ttcctgacgg acgatatccc atttcataga aatgaaaagt 2640 ccattggttt ccagattgcg gtatctatac acgtggtagg gcacatttac ttcgactgct 2700 gtagtgaccg actcaactta cgactgcttg gcctaagtct atcagactcc cagattctga 2760 taacattcag ggtcgttatc tcgtaaaaat ccggcaaatt agataagagc tggtcctatc 2820 tactccaaat agcctgagaa ctccaatgaa ctccaactcc ccacattttc gaagtcagca 2880 acaaataaca gtgtaagccc tggcccgcta tgtgtatttc agcccccatt cttatctctc 2940 atctctccta tgccttgtcc ttttaaccgg gctgctccgc acaaacatca ttcaggtaca 3000 atcacagcca cccgagaaag gaaacaaagg tgaagaggag gcatggttct tggttacttc 3060 agttgggcga cggcattctc gctgctagcc agtactgccg gggcagccat cgtcaaaggc 3120 cagacggttg cggtgggcag taatacgtac tacgtgcctc cgaatattgt cacaaccctc 3180 tcactgagcg gaaaatggtc gggccaggag gatggtctgg taccgctgac ggtctttaga 3240 agcgatgeca gaaacetgag categeegee gteaaggatt tggtagatat etaegaaaga 3300 acagatgacg tttttagcac tggctttttg gagagtacgt ttacctttcc tgcagtcatt 3360 aaggccacga tagctgactg cagcagatgt ctacttcaca tacaatggca gccataaaaa 3420 tccagtcctg gatgtttcat tgccttcatt atggccgact cgattctttg gccatgctgc 3480 cccttacaat ccccagactt ccgtcaatag cacgagtgac ataccaccag gcccctactt 3540 cctggatcca gtcacaggca acatctacga agcctacctc ctctactcag acgtcatggg 3600 ttccttcaca cagggcctga tcgccacagg gaacaacacc tacgatgtcc tccctgccag 3660 cctgcaaggc tacgactcac tgacgattgg cgtgccatct cgcctgtact acacgaagac 3720

gccggaaaag ccgcttgccg gtgtccgtct gggagtgaaa gacatctacg acatcagagg 3780 cgtaaagact ggctgcggga accgcgcgta ctatgatctc tacccggttt ccaacacgac 3840 tggtccggca atccagtctc ttatcgacgc aggtgcagtt gttgtgggca aaatgaagac 3900 tagccagttt gcaaacgggg agactgcaac agccgactgg tgatactatc actcccctt 3960 caacgcccgt ggagacggat accaggaccc cagctcctcc tcctctggtc cgggctcagg 4020 aattggttca tacttatggc tcgatctcgc agttggcagc gacacgggcg gctcaatccg 4080 caacccaagt caggtgaacg gatgttttgg aaacagacca tcattcgacc ttgtctctct 4140 cgacaacgtc atgcccatgt ctcctctct cgataccgct ggctttttga ccagggatgc 4200 aaaactctgg aaaacagcct cggaagttct ctatgctccc tccggcctga agtcatacac 4260 caaatacccc aagtctatta agacaatcga ctttccaaca gagccatcca ctgaagccaa 4320 caaaatcctc ctctccttct tgcataaact ctcaaggttt ctcggaaacg ctacagcttc 4380 tecactggat tacgategee tetgggagea gacacaacea tegaeggtet egteggaeae 4440 gaccettace teteteetga acetaaceta egecateeta attacaaage aceaatttee 4500 telecttggt geaaaactet atgaagacea tgeageegee aatgaeggge geegteeatt 4560 gategacece gtecegttaa geegetggaa etggggtete ggttaegegg atgageaget 4620 cgaggccgag attcataata aggaaacctt taagtcctgg tggaacagca ccgtccaggt 4680 atttgacgag gagacctgtg cagatagtct ggtgctatat gtgggcactg ctgcaacgcc 4740 tacatatagg aatgtatatc gcgagtacgt gcacccctac ctaatattcc actttcccaa 4800 ggaaaccaac tggctacggt gccaatgcta acgtgaacag catccccgga attccactag 4860 gettetetgt atcceggatt tetaacatgg etggtgttee ggatatggta gteecaggta 4920 cgtcccttgt ctcttcgcct tccaccaaga cactggcaac aattaactgt gtcatatagt 4980 cggccaagcc cggtacaact ctactatcac tatgcgagag gagtacctcc ccgtcgccgt 5040 ggacattatt gccccgcatg gctgcgatct catggtgttt aatcttgtca atgagctggt 5100 ggaaaagggg atcgtgaagg agccagtggc ggggtcgacg atgtatgggg atgagacgat 5160 ttattaataa ttgtattccg aacaggattg attgtttaat tgttgtgcta gggttctgta 5220 gtgatgtata ttgggagctt aagatgcatt aacatctttg ctattctctg gttgtttcgg 5280 ttgatagece ggteeggeea tageetagat ttagtttatg taaatgeatg ateagtaete 5340

aatgaagtet ttatgeegta gaeetettga eteteteetg egttgtataa tagggaettt 5400 gctatctcga cttgggctct cctgcaacga ttattcaact gatttactac atatactgtg 5460 gaacgettet geaagatagg tegagaagee aatgtatgee teetgtttaa ataaatetta 5520 aaacaattac tgnaagctga tgttgcatct tgtagggtag gcgaaggtat agcgggcatt 5580 caggaaacaa aaacaggcta atattccgct gaacaagaat actgagtaat gacactgctt 5640 gtaaaccact aaaaaacgcc ggtatgtctg caaattctat agaagtgacc taagcggact 5700 cttcatctta ttttcctcct cagccggacc agccagtctc ttcccctccg gatcaaccac 5760 cggctcccca acaacagtgg ccttaatttt ctttccaaaa tacccaatct cgacgcccac 5820 cccttcattc agcccagcag gcacccaggc atagactact ggcttcctga tagtatatcc 5880 aaaageegea ttegtgacat ateetacage attecegeta agatagaceg geteettgee 5940 cataaccatg gacattccat catcaaccgt cagacaagtc agacggcggg ttagagcttt 6000 cttgccgcga gctcgtaacg cagccttacc aacaaattcc gctttcttac tcgtgccctc 6060 cagcttcaag ttggcaatgg cggatcctag cccggcctcg tatggatcat gctcggtggc 6120 catgtcaact ccatacgtgc gatagccctt ctcgatacgg agggggttgt atgccgcccg 6180 cccagtggcg atgaggccat gccttttgcc tgcgctgaaa atcgcctccc acaggcgtgc 6240 gccgtgctca gcagaggtct ggatttccca gccgtattac gcgccatagg acttcctgta 6300 caccatggcc gtgatgctcg cgatagagcc ggcccagcac agcgtgcggg cagagcttgg 6360 ttactgagag taagtaccct ctcagacctt tagctggcat ggaaaccccg cgtgggagca 6420 gaacagtega tgttetgeta acatgeceet cattgecace cageatgggg tgeeceecat 6480 tactegetet taegteette gggateetee tttttetgag eetaceeate teettetata 6540 ttccttcctc ttcaggcgcg tcaattgtct actcaatact tcctttctta tactctctac 6600 ttcccccttt actacctgta ctccctcttc tttctccttc ctattctctt cttctccatc 6660 gtttctcttt tttctcatcc ttctttcact ttcttcactt tctttttca tactctcctc 6720 ttttcattac cttctttatc tcttcctata tctctttctc ccgtgtctcc ctcttactct 6780 ccttccacca cc 6792

<210> 3239 <211> 7219 <212> DNA

<213> Aspergillus nidulans

<400> 3239

gacgaggaag agcgagtgcg aagtgtgata cctcctgctg tgcgagcacc tcgaacacct 60 cgaacaccgc ggaagcaggt tgacattcga agctttgggg agtacacggc tccgagtacc 120 ttgaagcgga aggcaggtgc ggactcgttt gatagtgctg tggggagtat aaaaaataat 180 ggtacaccct cacggttgcc gctgcacttc gtggtctaaa aatatatgct agagccagca 240 tcaccgtcag tttctaggtc cgtcaagaca gccaggattg gctatgttga cgcagggacc 300 cagaccggcg agactgagac tatctccccc ttagcagctc gttcggcttc attcacagca 360 actagacteg egecgacaac caggeettta ecaagaagae gattgtttga taactaettg gcagatgcgg agagaaaatc cgcgactata gatccagttg ccccccaaac tcgagaacat 480 aatacaaaca accaagattt ctctttacca acgtcgccaa cctgccaacg accctggcag 540 tcgttatctc cgcctaaaac accaatgtca agcccacgga atcaaaggat agagtcggtt 600 ttgttctcag ccggtggata tcctcgtagt ccgtctccac aaatccgaca gccaacaaca 660 cctccattta tgcaaagcac caggataggc ttaatcactc caggtggtga ttgccctcgg 720 tcatctcacc atcactggtc cgcggagtgg gagaagccgg agcccagtac accgacaaat 780 agcaaccaca ggtcccagtc gcaatctcaa caaccccgcg ttactctggt caacagcgac agcgatgatg aatcatatga ctgggatgac gatctcaatc agactatgct ggaggttgtg gaatctgtcg aaaaccaagg tgttagccgg cttttcatct gacccttacg tcttttttta tcattactac agtgtatacc tatgaccagt attatatgaa cgagccaatg tacacagacc 1020 caggttetet tecetgetge atagagtget gtttggtgte ecetttgtgg tttagetggg 1080 tcattgacca gataagacat attaagactc ttgggcagct ctgaacgtgc gagtcagtca 1140 cggtgcccga aggtagcaca ggcacggcct tcgccatgaa cgcaaatcca ttcctcgcta 1200 ctacctaccc taagaccctt cctatccagt gtagtgcggc tacccatgcc tgcatagctt 1260 actgctaccc gatettgccg ccgttatccg gagacgccat cctcgacccc cctacaatat 1320 tccacggcat atttagtgcg caactgggat attcccacag ccttaggtct ctgttggccg 1380 gtgcatcgcg tatccgagca atgctccctg cttcagttgt taagctactc aggtgctgga 1440 aagcctccga aaatccctga aattggccag agcctggcgc ggatcgtgga ctttataatt 1500

tgagaagcta ccaattttta cgacgtaagc aagatggtca aggaaggtaa agtgtataga 1560 tetegetett ggttettett ecaggggteg cattetaeta aateteette gtteaceagt 1620 tggacaacaa cgattaccag cacaactttt ggaggtatcc atggtaacac tttaactgca 1680 gtttgtccgt gagtgtatct gtcaaggacc tcctttacgc cataatacta acagctgtga 1740 tgtagtagtc cgattagcat gccaatgctg aggaatatgg actgagagag cagactcaag 1800 gcaatgaagg gctgtatcct gctagatagt tggagtcaac aaaggaggtg gttggactgg 1860 tagcatgcct gctagatgat acttaaggat ttgtactggt ggggtacaca tggttttagg 1920 gggattaacc actctctgat gaatcatgta gttctattca gtgcttggtg tatgcccaga 1980 tggttgatta gggttttgga aatgaatgga ggcctatata taccgcttac aatggattac 2040 attegretgt acttatataa egactageaa eggagatatg gtaacteeaa ggteeteatg 2100 gacgtcgtga cgccttgatt tgcccgtcac ttaacaatta tttactcctt gatatatcag 2160 ggtatttcag cgctctgtgt aaactttagg aatactgact agatagtaag agatctctat 2220 ttaggtatgt acagcagaag aagcagcact ctctatcgca aacccaaaac aacttgtata 2280 ccactcctgc gcccagtagc tcagctcccg tcaaagtaat gacagtcgta agtgccaccg 2340 tgaagaccga cgattagcgg tcgatagtga ggagacggag agtctgtagg gatgttgcgg 2400 attccagcaa cggtggcgcc gttgggcagt gaaagcttga aggactgcat catatcatac 2460 catacctgca atgatagccg ggttccaaga actgaaggta ttagtggtga acaggaggtc 2520 tcagtgcctg gaaacggtca gcgttaaata acctaaaatc catagaaccc aagtctccac 2580 tcactcatca agectttget eggeceateg aggtggacca ggaccaegat ettaacteeg 2640 ccttccggtc agcacatgga ttgattgcca tgggatagct gttgcccatg gtggaacaat 2700 ttgagttagg gtcaacggtg gcttcggact cgcatggata gacgttccga cacaaccagg 2760 ccacggagtc gcataactat acgagcccgc caaccccatg aaaagctttg cattgtgcta 2820 tgcagtagtc ttcaaacgaa atcacattcc gcgccttgtt ctatgatatt ggctgtcgtg 2880 ctgacaccca gcagacccag agattagtgg cgggcgagtt ggatcggtaa ctgggcatta 2940 aacgacgtet atettteee tagttteeat geaagaceea gacetegeet gaegteaage 3000 gagccgttgc aggtcgagct ctctgtataa agccgccttt ataccattct tgtgagcagc 3060 atctagcact gcgtctacag attgggctgc aggtgccaat ttgaaaccca ggcattctct 3120

ttgaaccagc gatgcccttg aatttactag ggatttgttt aggagcagca ccagtatctg 3180 tactgaccag acctagccat atggtgagcc tcatgatgaa gattgttgta tcttattcta 3240 gttcggttgc gcgataagat agtatggagc gtcaggctag atgtaatcac cagcatcaac 3300 cgtcaatatt atagaatagt gacggcctaa ttcttccaaa ttagctctat acagcggttt 3360 aactacaaag gaaattttaa gcattttagc ctgatacggc aattggagtg gacataactt 3420 ttgaaccatg gaagtagcag aattcctgca ttgccattgg cgagccggaa cttgatatat 3480 aaaataggaa agctccatat atgggtagct gtcacatacg gttcgacaca atataaatgc 3540 ggcctgtttc atattcatta tcaaggaaag acattggagc tagcacaaat cacatggttt 3600 tetggtaaac ceacatgaga ttgtagttte ggactgacgg agattgagea ceatgaatta 3660 cgcgaaatca aaccctacct acctagattc aaacacaaac ttgactcgaa tccgaataga 3720 ccagatatat agtgcaaaga ggattcttat gcagttcatc gagtgccttt gctccaccat 3780 ctagttctgc agtgtccctc attaccgctg tgatcaggct gccttgataa ctggcatatt 3840 agatteggee eagtettage agettacaea atecatgata cetgtagtet aegeaagaea 3900 tattagtete atatttteag ttatetaetg accaecteaa tetecegete teteaattat 3960 atttctccac catgagcaac cgttagggga cagagtaggc cctgttagtt cgagctctat 4020 gtgcattttg aggactagac acttaggact ttggttgaag gtgctgttcg ctgaatatat 4080 ccattatcga gaagtctgaa ttggcagtta tttcccagcc ctactgcaca cccgaccaag 4140 aaggttcaga atcatgtaat tactgtacaa actcgagaaa caagtgctac actcagcaat 4200 aggtgctttg ggcgacgaac aactctagga gccgaccaga tggtatcgtc atcaccgatc 4260 gacaactacg ccatagcaaa aaggaaatat gaaatatcct ttgtcctgag gtaaagagtc 4320 tactgtccgt gctcgtttat cctggatatg ggtagtatat gcggctggta ctctcagctg 4380 ccagcattgc tggccaatct caatcctaac tttgctagta tctgcaacac tcttgctcac 4440 ccttgctgtt acactatgag aaaagtggtc tatcagcctg ttgcagttat ctgaaggccg 4500 gtgagccccg tttgcaacat gaagctagaa agaataaccc catgcagcga gcgtaatgtg 4560 ggatagacgg aggtaaggag attgtgccaa cgaatcctcc attgttttgg cgcccactcg 4620 teettttggg gaaccaacae ttetageage caagagtett atetgettta acaaccgtet 4680 ggtgagateg taaacageag gageetttge atagaceete tteaatettg attggetgte 4740

agaccagete aaatgecaga geageaaaeg gaeggeatae etgeataeta aaggegatgt 4800 cgtacactca accagatcca tacctggtgt attgtgctat gccggccact tatgcataat 4860 ctcaattctc tctaaatttg gcatatctct gcagcttgcc tcagtgaatt tatagctgaa 4920 cttgggatcc gggaccagac gacgtgctta attatcaggc agttggtttt cgctggcagc 4980 ctctccagcc attgtgtttg taggcgatca gtaaggtgaa gcaaaaagct ctgattcgtc 5040 teactgcage acaattetea acaaagttgt ettgacagag cettgggteg agtgtaatgg 5100 ctcagtcggt agtttctaga cagaatcgaa gagaccactg ggagctgacg ggatgcgagc 5160 agegacegaa ecaageaggg aetttteeta tggeateege tgeecatetg aeteageaat 5220 gttttagcat aagcaagggt ttgcgaggcg cgcgtgccaa tcctcaacac gtggaggcca 5280 cggccttgga cacagccgtc gctgctgaga cggatacgag cgggttgggg gcgggttgta 5340 aagaagggtt acacggggct gtggttctac tctgtgtaga caagaatcgc caggctgagg 5400 tggactaaat ttcgaagctg agagcagagt atggaaacat tagaagatac gaatagtttc 5460 ggtcgtggtt gttatcctct ggaataaacc tacgcctggc gccgacccaa tatatgtagg 5520 tggccgaaac cagtgcattc agccactcga taacttcagc gcaaacaagt cgctagagtc 5580 gttagcgtac tctggtctta caccgcttca caattactta acatggataa agcaaatctt 5640 gaaaattcat aaattggaat caaatgaaag gcgaattgag ttccagaatt gaagtcccga 5700 agcaggacca gggtacgggg ataaggcggg aagccgatac gtgttcgggc ccggacgaaa 5760 aggeteegta tagttgeate tggetgegga gataacaagg caactegett teaagacatt 5820 cctgatggga tttaggcctt ataaggagac tgtattgcga acactctgta tttcgaacaa 5880 tatactgtta agcgtaagcg cagtctgaag ctgcagctgt ttagccttga agactcgtcc 5940 caaaattata acggcttcaa ggtagtccgc agagaagtca gatcgatgcc ggcqctcgga 6000 cgaagccatg tgcgattgcg aagaacggtc ggggcgcaca caagtaagac cgacattcta 6060 gaacggacaa atccactate gettgageeg agggattaet etgtaceete gettggegeg 6120 gttccgccaa cgtcattgac tcgcttcccc tgcgagaaat cgatctccgt gctgtcagta 6180 actcaattgg actacaaggc tcgtcagagc aagacacaga atcaaatgag acgtccccta 6240 ctgcatgaag gtgcaaggag ttcatggccg ccaggctgcg gcgcgatgga gctgtcaaca 6300 cagtccacaa cacatgttcg caactagcag aaccgatgct gacgcatgtg atgtatcaag 6360

aattcataga gagcacagtg aaaagctcgc gtattcggaa tccgaaatga cgtccagacg 6420 gtttctaacc cagaggaatc ggtgttaacc agccgggagt aaaaaccgag taaaaataga 6480 ccggtaaagg ggggtacaaa gaaagagccc gtggataatc cctgctctgg gtaagctgac 6540 qqatqctqat ctgataaccc tqatacggga aggatggcgt tgcagcctgg atggttcagc 6600 ttagtgggag aggcgttggt cgcttgtttc aggcttggat tttcagcctt ccagggccga 6660 tegetgggee aggegagtgt eagattttgg aggeteeget gagteatgge ggageeacet 6720 ggagctaatc ttgcataaca ttggctacga gccacaaagt gccgctgagt aagcggattt 6780 atteggaggt tetggtegge atggeetaaa eteegaegee gattegttee ggeecaetgt 6840 ttttctttct tctgcagcat ggatgcagac ttgttgttggg ttgtccatgg tcaatcgttc 6900 gcttctctcg ttcatttttc gttattattg gaagatgacg acactccact ggtcatgctc 6960 acttettgea tggaagtete tggegettee tetgttgaet cageggattt gegttegeet 7020 gggtccccat acaggccaga gataggggag ccatgtgggc ctctagggcg gattcgggct 7080 gattatcacg ccgtctgaaa tctttggaat ctgacccacg cccctggcgg tgtttatata 7140 cttgctcagg gctcccgact ggactgctga tgaaagttgt gaatcccctg tccgctacgt 7200 accggcttgt gattagtac 7219

<210> 3240 <211> 590

<212> DNA

<213> Aspergillus nidulans

<400> 3240

ctggcggag tttgattga tggcggattt ccagggccaa ctagatttta gcgggctaga 60 ccgtccgaac ctgggcgtag aatgagctag tatatactgt ggttaaaaaa cgcagctgaa 120 tggccagaca gaggtaccag ctcattagtc cctcgacttt tatttggctc atcatctctt 180 atactaacca taggtcatag attaccattc tggcttcgct atatgtcctt aataatttcc 240 aacgccgaaa atattataga cagtcatatt tgatgctcta cattggtcag tttgttatac 300 tgagaaatta gcgattattt tcagctctt cccactgtag acctgcctct ccagccgctc 360 ggtttgctct cccctctttc gtcaatttct agcagcttct gtatggccac atcatcacca 420 caccactccc tcagcatatg gaaggactca agagtactat catgataagg ccccaaaact 480

	ttctcctctc	tatgggtcgc	aagagtcatt	agccggatcg	cttcggcatc	tctcccgtat	540
	tgcttgtgag	tgaccgcaac	aaaatagaga	catcgcatgg	taaacgggtg		590
	<210> <211> <212> <213>	3241 1197 DNA Aspergillu	s nidulans		·		
	<400>	3241					
	accactttcc	caaaacgggc	ttgttgaggg	agcgacgacg	ctggcaacaa	cgattggtcg	60
	attgacaatc	agttcaactg	tttcaacaaa	tcaacatgtg	tcgacctgac	tcggcatcag	120
	gcacctgaca	aacccccgcc	tttgtacatc	atgccctctc	tcaacaatcc	ctttacacct	180
	cacactctct	tctttcatct	tacgttacta	tcttactatg	cattgatcac	ccaacacact	240
	ccctcaaaac	caaggataat	acctcaccat	ggcaccgaaa	ccgaagtcgt	cttcgcgccc	300
	tcatagtgtc	tgtgtctccc	gcgcagcctc	gcccgccaca	gtctctctcg	tctccacgct	360
	cccaatttcc	gacccagagc	cttctgataa	caacaaagcc	tatatcccgc	tctgcttctg	420
	tctgatctcg	ttcgcggtca	tgatttgcgt	caactaggcc	gtacgcggag	cctcaacgta	480
	tgccgaggct	catcaaaagg	cggtctgtcg	cgggacgaga	gtggttacac	cgaacaagag	540
	ctgaggccaa	aacgttacca	tccccatagc	ttcgtctccg	ccctgaaggc	ttagacacgc	600
	cgctacatag	cccgcgtcca	gggcaacatt	gaactcaatc	tcgacagtcg	aacgaatcaa	660
	tgtcgtccac	gtcacaacgt	tagcctcctc	tagacatcca	tagagatcta	taccgatata	720
	tgaagtgtga	ttgatggact	atcgccacgg	catcctcatt	acaacaacag	cctaccagcg	780
	tctagcgctt	agcacttaat	tcagccggtt	atgcgccatg	gtgatacgaa	cccatcccac	840
	gagacctcga	gatcattcag	gtggacaggc	ttgtctatgc	accttgtgta	gcacaacttg	900
	cgaaggaagc	tattacgaac	gagcggcagg	atagctaaca	tcccatgctc	acgtttagta	960
	tccctcgact	cgctcgaatg	ttctagcttg	gacgcccagt	tctgggacga	ttgagtccca	1020
	actgatcaca	tgtatgtgat	tcatatggct	ggaagatgat	atcgtgccct	ggtggcatac	1080
	gatatcttcg	gtagactatc	cattattagc	gcggcgtcta	gcggataccg	tagcggttac	1140
,	attacgacta	tgatggatcc	tgctgattac	caactggaga	tcgatccata	ctggaga	1197

<210>	3242 .
<211>	1467
<212>	DNA
<213>	Aspergillus nidulans

3242

<400>

tcattccgtt tgtaaaagtc gaccaggaat ttgtgctgtc cgggcaggct gatcttcttg 60 tataaaatgc cccgcgtccg ggaagacttg taattgatat ttccctgcaa aatatagagt tagaatagcc ataccttaga aaggtacgaa agcaagtgga ggaagactca ccttgcatct 180 ggccaatcat taactcctta tccagcctgt ctgtcccagc caagaggagc aacttccccc cacgcgcttc aagaaacttt cggcttagac caacaaacca gccttcccaa aagggctttg 300 tttcggcgag attggtgcgc caaacccatg gctttgaagg gtctttaggg acatcttcgt ggtagaggag ggatgggacg gatacacggg ctgaggttct attgcggatt gtgcgcgagc 420 gtgtgctatg gaaatactgt tagagaagat gtctgttatc gcctagtacg catggacata 480 ctgccattct atccctgaag gaagggaagg aaagcgggat ggccgagttg agaggtatgt 540 ctccatgctc tggagggcat ccatcgccga acctaatgtt ctgcatgagc gtccgcgtcc tggtccagaa ataggttgga acceacette gacaaegtee aaaacageat aagecageag 660 etteccaect aattegeett tettegeaac ateggtgate acegegeett ecaagetatg 720 gccgacaagg acaatgtccg gcagagtctc ccagcccata ttagcttgcg tttctcggat 780 aacgaagagg agatcctggt tcagcgtgtc caggctcaaa tcaagccgag ccgtttcggg atctgcctca ccatcttcac tcgctctttt tacggatgta ctgccatgat cgcgggcgtc 900 tgcagagagt atccctgcat tgggcaggat cttgcggatc tctgcagcac aatttgcaaa agagaggcca gaagagcctg caccgtggtg catgacaaag acggggcccg aattcgtcgg 1020 cgaagtgagg tatacatcga tgcacaatgt ctagatcatt gactcgccgt tggaggtaga 1080 gttcctgatc gaagaagctg gtccattgta aagagttcag tgccctatct tgcaagcttt 1140 ctctccacgt tagtcgtaca atgtacgtca tttcgggtag gagaaaagcg gaaaactgaa 1200 tcgaagaagt atgtatacgt accetcgggt ccetcetgge cgagegaata attgtttaac 1260 tggcgaaggg gtcaccgtct cggttgatga tccggagtca tcgtcctcgt ctgctacgga 1320 ctcgggaata ggaggggct ctgggggaag cttagccaat ttcgatttgg cgaaggactt 1380 ttgcagatcg ctcatattta aggtccttgg ataatggaac ggcggatagt tgtgggagcc 1440

<210> <211>	3243 993	•				
<212> <213>	DNA Aspergillus	s nidulans				
<400>	3243			****		
aagctaagca	tgctgatcgt	tgaatccggt	tgtttactag	gaacaacata	ggtgcttttc	60
agattaagct	agtctcatca	ctgcagcagt	acgatccagt	atggtcccac	gaggaaaacc	120
attccaagtg	tcccagcaag	cactaggagg	cgtacggcta	gtttttcatt	aacggcagaa	180
tggcatgttg	ttgatcggag	atgttaatca	aatatagcaa	gataatccca	acagcattca	240
cctgcgcaga	taagtattaa	gttcctaagg	gaataataat	gcaaagacga	gccagggcaa	300
ttgccctaaa	acgacctcga	ggcctcgagt	gagacgcacg	agttcaaatt	tgacgagatt	360
ataggcttgt	ttggtagacc	gctgccgcac	gctcgtatct	tatatgactt	tattctatcc	420
agtttaaatc	cagcagcggc	agcagcagca	aagttagaga	tccgcagtta	ctgaagagac	480
aaccgagaca	accgagacga	tagccgccta	tggccgatca	atccgataca	ctacctctgc	540
gacattcagg	tacgcctcat	actcgacctc	cccgccgtta	tccgtctcta	gatcgtaatg	600
atagtgacca	cctttccgac	acccttccag	gtcaaagcaa	tgcgtatgtt	ccatcctcaa	660
ttgcagccct	tccgggtccg	cactatggaa	gacggtcaag	caaaccaccg	gcgcttcgct	720
ggtatgatac	tttagccact	cctgctctag	gacctccgat	ctttgaacgg	caggtctctg	780
gagcaggaaa	gtccggcatg	acatggaatc	tggcctttcc	cgccttgagg	agaaatacgc	840
cgcccatact	gatcggatga	gagtcgccgt	acgccgcgag	cagtccagcg	cggatggagc	900
tggtgaaatt	ggccggt.cca	gtccttcctc	gcgctgtgat	cttgagcact	ggtccgggca	960
ggccgctgga	gccccagagg	ttcaccatca	gtg			993
<210>	3244			•		
<211>	3803					
<212> <213>	DNA Aspergillus	s nidulans				
<400>	3244					

gtcatgtcta tgtctgtcta tacgcaaatc ttacaaatag gagtatcaaa agaagcacag

taagteetag tteeggtaaa eggacaacat egactaacaa eegteagcaa eegaacaaat 120 gactgaaaca agagcagggg aagcaacaac atacctcggc gaacttgggc tcaatgaaca aagccctccc ctccgcaaca agcaccgcct cgtcctcact cgccgtcttc tttgccggca 240 teatecttat cactecetee acceaegeet tecteecete aacettgaet gtetetgeee 300 tcagcacgta aacccggtcc ggcagcgccg gcttccggta atccacattt aaattcgccg 360 tcatccctgt tccgctccga aaagactgcg acacgcaatg tgcaaacacc tcatcgaaca 420 tgacagataa gaacccgccg tgcacgtacc cagggtgtcc gcacatgtcc cggccagtgt 480 ggaagacggt cacggcgcgg ctttggcgcg gcccggttga caatctttct tccgcagttt 540 gagacggtgt gtgtcgcgat aggaacatgt atggcggcga ggtgagcttc gttccgccag 600 · agagegttee tgegaegaag tgegatggee gtaagttgge tggeattgtg agatgeggee 660 gggtctcttt aagtgtcgga tcctgacgga ggagctgaat gattgggtgg gtggtcaggt 720 ctgtggtatt ctgagtcggt gctgctgtgg ctgtttgcgt gccaggctgg ggcgcatgct ggcgttggaa agatgggggt gggtgtgtgt ttttgagcgc ggaaggtgcg gcttcggttt gcgctgcgcg gatgggaata ttcggagaca aaatatgttt gactggtgcc tgtgtctgcc 900 tgcgcagaag acaagctaag gatcgtggaa tggaaaacat gtctgttagt cgggagttgt gttttggtgc cgaatgtgta gtgtacttca actggactat atgaacggta tagctgtcta 1020 ggattgtgtt cgtcctttgt atatctcagt actcgacgtg gtctaacgaa gacggtctga 1080 gcttctttaa accagctgca ccaatgaatt agaagaatgc ctttagatac acaaaccgag 1140 aaaaaaatca ttccgagaat cgggatggac attggcgcca agtggagcag cccttgttct 1200 cgggcacaga tettgacact tatgacgaaa eeggetgtge tgtacetage eetatgtgge 1260 cggtagtcgc tataccettt ctgtagttga caagttgtgt gctagataat ccgagatttg 1320 aatgaatgca atttacaagt gcactagcct gcgttctaca gccctggctt ctgctggctc 1380 aactcagcct aaattacaaa aaattacagg agtgttctca aatggtctag ttccttctac 1440 ttcgaatagt tatttttact attttctaat ttggttttgg atgcgtcgat cggatgcacg 1500 agcgccgatg aactcaggtg aagtggtggc gatctcggca tgccgatgcg gaacatgcga 1560 ggccgatgct gcaaagttgc cgagacgatc actgccccct cggcatccag aacgaacatt 1620 atagggacca tggactcaaa tgagagggaa cttcttttac tttgtagcat gttagttcca 1680

cgttacaccc actictatticg gcgtcagata tittetatgct gtgctacggc cagagcgact 1740 agactgccgc aagcatggca ttcgggtctg ccgatctagc gccgtaatgg ttaatgataa 1800 aaaaagagtt gagggtctcg aactgcgcag tgtcatttaa aacatctctg tagcgggacg 1860 aataggtcag tgagactgga aagccaacaa agttcgtact cgggaagtca ctctcaatca 1920 tegeacaget caegtetteg egtettteet ttecaectee acteetett tetteteatt 1980 caggcaaaca catctcaaat cagtaggtgc cgcaaatgtt accaggactg ggtaatatct 2040 cagaaagcca gtcccctctt gttatgttca ccgtcatttg gcctggtcca attcctaatg 2100 aacctacagc aacggtcatg cttagatttc tggtttttga ggtcgaatgc tatttaatgt 2160 acgagagget catecatttt eccegggaaa gacaaaagte tgetggagag acgeaceggt 2220 tgacaggaaa caatgagttc ggagagcttg taagctgcca ttcagactag gtcacccact 2280 agtgactatg tcatcccggc atcagagcaa ggtcaatgac atgagaacat caatcgagta 2340 agtgaagtgc cggtatccca gcactaaagg gtgtcaggat tgcagttctg atgggcgact 2400 cagegegate cagtacegtt tacttegeaa gggactactg egeaggetga gtgcaagtat 2460 acgactaatt gtatcgccga caacctagcc gtgctgcaaa tgcctaaact ccttttgttt 2520 tacgattaac ctattgggtc gatagttgct gctttctttg gaaggacacc accgcagatg 2580 gactcatege ecegaatact ttaceececa gagaaagtee eetteeaget gaegtgeaeg 2640 cactetttga tgtetetttg accteteete aateeaggtg tatgeeegta tetaatetee 2700 ctaccttagt ctctatgtct gcaggttcaa acgctaaatt aaacgaataa accctgaggc 2760 gaatctgtcc taatgaccgg atcaacgatg agtgcctgag atggcactac cgtcaagtcg 2820 ggatctccca gaatgcgtcg agagatcaag gaatcctgcg atctaggcct gaggattatg 2880 atgataaaga gatgataatg gagcacagaa ctgcagctga tattggaagc aatccgggga 2940 tegectatet ettegggeee tatgttggag teageetage tttaetgeet aacetetega 3000 ctgaccgaag ttaatgcaaa atgaggatgc tggccttaag atcttcctgc cccagccgat 3060 tectetette caacatggtg ggggtatgee aattaeggea tetgaactae ttecatgtag 3120 ctacaccagc cttcttcaag ccgctcccat tactataatt gcagtaattc ttacaaagat 3180 gaaattgcaa tgatgaattg accatgagaa taaagtgaag gagtgtcgga agtcgccagt 3240 atgaagetge ttetgtgtga aaacagaege gatgagggte eeteegeaaa accetateae 3300

agtagggett tactegegat ectgateget tetatega gtggggagtg aaggaatega 3420 ttatgattgg ecegetegta eegggegggt tttttaegag ecteegaatt atetegteea 3480 gacaaagtea tacatagtta actatagtea aegtaeetag eaageeette gtagatataa 3540 ateteatete eteataaca teaatteett eetateete tttteeatet geteagteag 3600 egeaacagae etaatetaa aetteteagg teacagaatg etegtettea eaateeeaet 3660 egeaacagae etaatetaea taaeeeete ageettetee tteeteeta aeettetaeet 3720 egtetgeaaa aeatgteeet eteteeegg tegteettt eetgtateeg aagteaatet 3780 aetetatete gegetetttg agt

<210> 3245 <211> 587 <212> DNA <213> Aspergillus nidulans <400> 3245

ctcgctgcgc cgcacgggac caagcgtgtt aggtagaaga actgggtgag caccggtttg 60
gcctccacgt cgggagatgg cgaaggtgta ggctgaggcc ggagcgaggg gatgaagaag 120
aggataaggg aagaggggt gaactggacg agcatatgca ggctggtcgt gaagaggggg 180
aatgggaaga cctccttgtc gttctcgtct cgagaaaaca tccatttatt gtactgcgcc 240
aattagtccg acgcgacgag gagcacgcgc tgggaaactc acaatagata tggcgagcga 300
gaaaaagtac cataacagaa tcaatccaac attaaccagc agcctgctga taacagtccg 360
atctgctgaa ctgagattga acggatctcc gcgagacttt gtgcctgcaa tgcgagcatc 420
caactgcctc cgttgtttcc gtcgtcgacg ccgctggcgt ctctgctcgc tgtgagtccg 480
gtttcctcat cgtcaggata gtcgtcgtcg gaactcaaat aacgtccctc ctcactctcc 540
gcgatcgagg ataggtctga aatatctgca tcatcggcag ctaacgg

<210> 3246 <211> 2795 <212> DNA <213> Aspergillus nidulans <400> 3246 gcggttggcc gggacgcagg ttttttgcgg gcgccgaatg ggtggtgtga ggtttggctg ccttaaggca tcacttcgag tgtaatcgca gctcagcttg ctgaggttgg tcaaaagatc 180 ggtgccttgc tgcctggcct tgcctgaatg cttccgcttg ggcccgatga aggccttaga aggcctgagg cagcacaatt gccgtgcttt gttttggttg gctggccata caaaaggatt 240 300 ttactcactg tgattggtca gtcgggaatt gcacggcatc ttccgtcccg aggaatcgct ctcagccttc aatgttgtcc agggtcaggg aataaaaaca ggggaattac tggatgctac 360 420 acatggctgg cctctgcaga tggtggacca ggctgcattc gtcagggaac acatgcattc tgaatgttgg cggaaattgc ccaagaagcc tcgccaacac tagcatatag cacagaagat 480 atatatttct ccagtgacca cccgccataa gaggacctgg gtattgtctt gttgcaacca 540 atcgatggcc cggacatttg ccgaccagag acgctattag ggatccatat ctgatgattt 600 gcaatcgatc taactatcgc gctactaatg ccgagctcta tcttgttgag cagccgcgca 660 tgtgaaagtg ctttctctct ccggcttctt accagcactt gttattgtcc tcctcagacg ctggaaccta gatagcttgc ctgcgaggca ccattcacag gcactaatta gtctccgaaa tettgttetg ttggetttaa acteegtage gatggaceag geegtgeeat agggaceea agtttcacgt gacccgcccc tttattgagg ggctaaccgg atttggcgct caacggacac gccggagaca gcaagccagg caacctcgac cttgaaccag ccaaaaagac acgcttttca actettteet caacagette getteteece eeggaceetg ttgetegggg cetttettte 1020 ctttctttcc ttccatcatt ctctttcttc ccatttacct cgcgtctctt tcaattttct 1080 ecetaattge ggttetegae cetgteageg eeegaegagg aaaaaateat teaategtte 1140 ectecettee taaceegeag etetagggeg caagtetgte teagegegat egtgetatat 1200 agtcagcaat ggagtatttg caagacatcc agaagccgtc cattgagggg cctttcggca 1260 tecacetatg geogatatte gaeaaggeet tteaggeegt tatgggetae eetgeeageg 1320 agttccagtt cgttgagggc aagacgccga tgtcgacctt cagggagacg gcaatcatgc 1380 tcattgttta ctacgtgaca atcttcggag gtcgcgaggt gatgagaaac cgcccggctt 1440 tcaaactcaa caccctgttt atgatccaca acttcgtttt gaccgccgtc agcgcgattc 1500 tgttggccct ctttgttgag cagettgtte ctaccatetg gaaccatgge attttetact 1560 ccatctgcga ccaccgcggt ggatggacgc agcccctgat tgtcctgtac tatgtgagtg 1620

tgtcggttgc atgggaatga agcgctacta acaagagtag ctcaactacc tgaacaaata 1680 cctagagttc ctcgacaccg ttttcctgtt cctcaagaag aagcctctga ctttcctcca 1740 cacctaccac cacggcgcca ccgctctcct ttgctacact cagttgatcg gcctgaccgc 1800 cgtccaatgg gttccaatta ctattaacct tttggtgcac gttgttatgt actggtatta 1860 cttccagagc gctcgcggta tccgtatttg gtggaagaag tacattactc gccttcagat 1920 catccagttt gttattgacc tcggtgagtc tctgctgcgc ttgcgtggac caatctggac 1980 ccgtggctaa ccgcaacttt agtcttcgtt tactttgcgt cgtacaccta ctttgcatcc 2040 acctactice ecigggetee caacgeigge aactgegeeg gigaggaatt egeigeette 2100 gctggaatgg gcatcctcac ctcctacctc gttctgttca tttccttcta catcgtcacc 2160 tacaacaagg ctgctaagac cggtcgcccg cgtcgcaaca ctggaaagca ggcggttatt 2220 gacatggcca gatatgaagt ggctcctccc tctcctgccg gtgagaagaa gtcgaacggc 2280 teggeegtga ceaetggeeg etecaaeggt eeegetaeee getetegeaa ggegtagatt 2340 cagggacgag tacgacgata ctcgaaccat gtgaactagc tcgtcagcca gttaacccgc 2400 gtgcggagag ctcggttccc ctccaggcgt tgcccctgga cctgcatttg accggcgtcc 2460 catagccaag coggaacggt toottotgtg attgtattat ggtgccgaag tatcgctttt 2520 aatgaatgac cctgatgaca ctggccgcct ttgcctggcc agatgatgca tgtcgcagcg 2580 agctttgtga cattgttggg ttgcaaagct agcggatgtt gtgcatgaag gttaaaataa 2640 tttcgtggaa tggttgtgtc atttctcggt gtattctaca gacggtttgt tggtcttgca 2700 tettgettet tieetettat tettiettit egettieetg eaggitgeag attititatt 2760 attattattt tcttttgaca ttcttagtat ctata 2795

<210> 3247 <211> 808

<212> DNA

<213> Aspergillus nidulans

<400> 3247

ggtagaatcg gagaccgtga gatcccgcat cttgaatatg cactattata tgccgccgcg 60 gtgtatgatc gtcgagctga tgacggatgg atccacgcac gaggggatat tcccattcat 120 ggtggagagg tgccgcgaaa gctaacggag ccttatgttg caagaaagga atcaactggt 180

ttcatcttta atcggctttg ggccgctgtc aaacgcgagg cgttgactat ccttgcggaa ggggtgtctg ttccggaaga gattgatgca atgtggagaa caatgtttat tcaqqgcqaa gtctcgcctt gcatgatgat ggatggtgag tatctggcca tggcactgct aagcaggttc agaatgattg Ctaataagga tttgaagcgg ttggactcga cactgttgcc ttcatcgaac 420 aacactacat caaggagcgt ggcctctcga gcgaaaagac agtcgactac ttgcaagaaa 480 actacctcag caagggtaaa ctgggcacta agtgctcttt gggaggactt taccctccqq ccttcccgga gaatacacag accaagcagg gcagtcctca cctgttagtc ctcgacgttg 600 ggcttcgggc agagacagct gccacgtcca ttggaacccc agccggcaag attctgtcct 660 tggccccaga cggagacaga atccagcaca aggttcagac ggttgtgcca aaccagcttc teceggatgg tattacaaac gategtgeea ecaategeat ettetggaea aacatgggea tccccggggg gcttacgata ctgtctgc 808 <210> 3248 <211> 534 <212> DNA <213> Aspergillus nidulans <400> 3248 gacgttggca gagacactgg atcgtatgag aagttgaaca gtcttgactc ttgtagcgtg 60 gatttctgaa gggaagcggc gagagagcga cgtcatctgt cctgcttctg actgttctgg 120 gacgcggccc ggtttgcatc cgcagacgac tctgggagct catattcctc agttacagag 180 gaaaaccgga cttgagccgg ttgctgctta attttagcgt cactgctgcc cgaatcagaa 240 tgtcgtccgg aagccatccg gtctacggac tgaggctctg ggtttgctgc agaatagccg 300 tcttgttaga agggatctct ggaaaccggt tgggggggg tgggggggg gggaacttcg 360 attgcccacc gaattgcgca gggtttctcc catcggcgaa gtcagtctgt ttggacgtca 420 taatgtcgag gactgcgggc gcaaatcatg cccctccaaa gacgtaatga tcactgaatc gatgagagat ggaaagtggg ccaagtgtac gccatgtaaa aattgctttt tcgg 534

<sup>&</sup>lt;210> 3249 <211> 1201 <212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

<400>

3249

gaggtttgga	aacgatagcc	atgtcagcga	tgtggaatgt	tggcaggaca	cggacccccg	60
cattcaactc	ctcccaggaa	caagagctct	gaaccgcttc.	tttcccgcat	ccggttcact	120
tttttttac	tctctaaaac	ttcgaagact	caatcaattc	ctactctatt	ttggccctgg	180
agtttattcc	tgacgcgact	ctcaacgcgt	atcgagcctg	agccagctta	tctcgttgct	240
caacggccat	gacttccaca	gctccatctg	acggcactgg	tgggtcaaag	aacgccgatt	300
attcagtcaa	tgacattcta	acgctgatct	acaggtatca	tcgatcttga	tccgtggtta	360
gagccttttc	gggaggctat	caagcgccga	ttcgattatg	ttgagagctg	gatcaagacc	420
gttgatgagg	tggagggagg	tctcgataag	ttcagcaagg	tgagtagact	atcaactatc	480
cagttgtgtt	ccccattttc	tctataactt	gtgtgcaacg	gctaattgga	gagcttcttc	540
catggggacg	atagggctat	gagacattcg	gcttcaatgt	cagcgagacg	ggcgacatca	600
cctacaggga	atgggctcca	aacgccatag	aagcggcgct	ggttgggtga	cttcagtacg	660
tctgtctggc	acctggggtg	ggtaaaatcg	ccagttaaag	cacgttacta	agactggcag	720
acaattggga	taccaaggcg	aatccaatga	cgagagacaa	cttcggtgtt	tgggagattg	780
cccttcctgc	gaagaatggc	acgccggtca	taccgcatga	tagtaaggtt	aaggtatgtt	840
tacggcatgc	agcttcacca	ccgtgggggt	tctaatgctg	acttcctaca	gataactatg	900
gtcacccgca	gcggagaacg	tatatatcgt	attcccgcat	ggatcaagcg	tgttgtgcaa	960
gatctgaatg	tatcgcctat	ctacgaatct	gtcttttgga	acccaccaaa	ggcagagcgg	1020
tataactttc	agcatgcgcg	ccctaagaaa	cccgaaagcc	tacggatcta	tgaagctcac	1080
gtcggtatct	cgtccccgga	taccagagta	gcaacataca	aggagttcac	agccaacatg	1140
ctccatcaaa	ttaagtacct	aggctacaac	gcaatccagc	tcatggcggt	tagtcctcat	1200
a						1201
<210>	3250					
<211> <212>	4981 DNA					
<213>	Aspergillus	nidulans				
<400>	3250					

cagctgcggc gattgttggt agggacaccc ccgacgcgac cagctacttc tggcactgtt

cgcaagccgc tcagcacgtc tactacttcc tcccaccgtt ctcggccgtc actcagttct gccgatgaga aatcgcgctc cgtagccagc tcaggtgatg agaagcgggg gatcaccggg tctgctaagc gtatgtcgct tgcgggcagc actgcgggca ctagagcccc tgtaaaatca 240 acgacaacta ccctggaccg ccgcgctagc gtagcatcaa ccaccgggac gcgtacatcc 300 actacttcct cgacaagacc agtgacaaag ccgacgacca caacaacccg gcctaccact 360 tcaacaacag ctacgcgaac ggcaacaaga cccacaacta ccgccgcgaa gcgattgagt 420 acagcaccca aaacttctga ggaggatgcc atcaagttgc aatctctaca ggacaagctc 480 agcgagagcg aagctaccat tgagagtctg aaaacagagc tggagaccgc caaggagaaa 540 ttgacactgc cacctcagac cgaaggaact gaggcagagc ctaacgactc tacaaaggct 600 cttcaggagc agcacgctac cgagatcagt caactggtgg ctagccatga agagcagctc 660 caggetttae gegeceaget tgagaaggeg gaagegaaga ggaaggaaat egaagagaag 720 tegetgaagg etetggagga egeateeeag getgeageet eteaaggega tgagaagetg 780 tcggcggctc tcgatgagct gaagcggtct catcaggccc agctcgaagc tctcgaaagt 840 gagetageag cacagaaate tgeagetget agttaegeeg ageagatega tteeeteaag 900 attgagttgc agtccaagtc agatagtctg gaagcggccg ccaaaggatt tgaggccgaa 960 aaggcgtccg ccctcgagga gctgcgcggc gagcttcagg ctgaaattga aagtctgaag 1020 caatccaagg acgaggcggt ccgcgctgcc gaggaatcta ctagacagtc cattgcggct 1080 ttggaagata aaattacctc gctccagtct caactgacag cggctgagtc cgccactact 1140 cagggccagg aagagactgc cgctcagctt gcagcaaagg agaatgaagt ttctgaacta 1200 aggcaggctg ttgacgccgc ccgagcagag cttgaacaag caggcgaaag ggctgccaaa 1260 gatettgaag caaaactgaa ggeeetegaa getggteatg aggatgegat tgeeaagete 1320 aaagcccagc acgatgaggc tttggcctcc gctgccagct cccatgcgtc tgaacttgcc 1380 aacgcaaagg cagctacgga atcatctagt tccgctcatg cgcaagaact cgaggagctt 1440 cgagcatete tegacaaggt caaggaggat geggtgageg agetgeagge gacceaceag 1500 gcggagttgc aatctctcca gcagagactt gacgatgccg aacaatccct tcagacaacg 1560 cgacaggete tggaagaggg egecaaegee geceagaeee aggeteteea agagategaa 1620 tegeteaagg ataaagteaa eacattggag teteagetat eeaceggaca agaagagate 1680

aaggccctcc aggctgagat ccaggccaag caggagcaag ctgacacact tcaacagaac 1740 ctcgttacat tcgagaccaa gctaaaggcg aaggacgcgg agcaggaagg agagatcaag 1800 gctgctgagg agcgagctgc agcagcagag agagccctaa aggagcacgt tcagaaggcc 1860 gctgctcttg ctgaggaaca tgccaatact ctagaggcgc tgagggttga tcatgctgcg 1920 gagetegaga gagteaagge tgaegeetee gggtegttge ageaageget tgaggagett 1980 cagtccaaat acaatgattt gctgtcgaag aacagtgaca tggaggcgtc ccacgccggc 2040 aagatcgaag cacttgaaag cgaactgaag ctgaccatgg agcgcgtcgc tgctcaaagt 2100 gccgctcatg cgaaggaact tgccgacctt caacaacagc acgaagaagc gaaaattaag 2160 ctgcaatcag aattggaagc cattcagetc tetaaggetg cegaggegga eteegageac 2220 agcaaagcca tcgaggagct cctcaccgtc caggagtcta aattgtctag ccttcgtgcg 2280 gatetggaat ettegeatga ageaaagttg gatgaaetee ggaagteeea egaegetget 2340 cttgcagage teacegetea acteaetget geceagaetg eegeecagga taceteegta 2400 cttgacaact tgaaggagac aattgccgat ctagagaaaa agctcactgc ggcggaacag 2460 teegetgeeg atteeaagae geaacatgee aatgagttet etettattga gaaggaaaag 2520 agtgaattgg agcagaagca gcaggcagcg accgctcgta tcgaagagct tgaaaaactc 2580 ttggctgctt ccgaggcagc caagtcggac ttggagacgg cgtcgaagca ggcgattgca 2640 acccaggacg agctgacgca gctccgggcc aagtatgatg caattgccaa agaactagac 2700 , gagtegaagt egeacaaege egegaetgag gaaaageteg eteaaggega gaaggaettg 2760 aatgcgcaga ttgacaaaaa catgaccctt ctcaatcagt tgggtgaggt tgagtcgtct 2820 ateteeggea geeggaagea cateegagag ettgaagegg aegtggeage getgaagget 2880 gaaaaagacg cgttgaagcc aaccaacgtc gggttggaag gcagccgatg ggcaactgat 2940 gacgacacgc cggccaccga gaataaccag gcagccacag tggaaggtga ggatatgggt 3000 teategateg agggaaeggt gggaeeteee egtetatgat egtettaate teecetegga 3060 gatctgttgt gtgcacaatt actgatcctg aatttttttc ccacatagat ggccagcatc 3120 caggaacagc ttaaacacat tcgggctgcc aatgacgact ggtatgacga acaccgccgg 3180 taggtgcttt cttacacaat ttcgaatgcc gctgctgact gctgtagtct cgttggcgaa 3240 ctagcacaag tgtcacggcg ggcgacgccc aatcctaatc agtctgggac accgcagtcc 3300

gaaaccgtga tcgaggttgc ctcacagtga gagtatccgt atggaatagc caggttcggc 3360 cgagetegtt gaatttteee ttattettte tetttgtate tgeettgtat aggaatagga 3420 tgtatgtaat aaagtgctca ggatacccga ttgaagtacc gtcgccgtgg attgatgcta 3480 tatgtaattc ggtatctggg tagcgatgaa tatgttatct gcaagagatt actattattg 3540 acaagaactc aatgagaaat ataccggtgc acagctcaga tacggtgtat atatatattt 3600 aaaaaattcg ccgacggtgt aagttcctca gacttgctta gtccgaccca ccggccacca 3660 cgaagttcga atgggcaaac accacataaa aagccgccat ctctgttgtt gcctgtcttt 3720 ctccagttca gccatttccc gttttcgctg gatctcgtat cttgcagggg tgagaatccc 3780 caacggtggc gatggcggcc ttggcaacat acatgatgca ggatgatagc cgtgcgcacc 3840 cacgggtaag aaactaatct gtgctacacg ctctgtagga gcagcgtcca cacccacaag 3900 cggccgctgg tattcctccc atgtctccga cgtgggaagc cgtggaagag gccgtgccgg 3960 cacgttatag gaatggatag gagaagacgt gaatgcccga caaaaggcgg cgtaactatc 4020 agggaggacg gtatectect ettecteatt tgegteateg tgtetteeat gteettetet 4080 gtttccaagc tcatcggaat atcggttata ataatggcga tgacggcgat gttgcttgtg 4140 cgattcagtt ccaagtccat gtccgtatct gacttcgctg tcaggatact cataggcata 4200 ttcaaagtcc gtgaactgat tctgactggc tgagggatca tgcgggattc tgacagttga 4260 cgagggatgc gtgccagagc ggtctgtgtt tgtctctgga cttgcgttcg atgctttggc 4320 gccggtattt cgaagagtat cctgggagaa tccgtcgtaa agagtatcgg tgtcaacatc 4380 acgagacagt gggagatgaa gataagttga gaaccatcgt ttcaaccgta gtgtcgaggg 4440 gggtttttgg cggcgtgcgg aggatgagga tgtcgatgta gatgacaagg aagaggagga 4500 gaacgagaag ctgcgggata ggcgtggcat agtgaacgac ggagaataat atctggctct 4560 agatattcac cagagcatgg agggtcgtgg agatgaggtg agattctaat agggagccat 4620 aaggagatgg ttcgatgggt ttgaagagga gggaatgggg atgacagctc gcctacacgg 4680 gcgacgagat gacaacacaa gacaggacgg ggaagactag ctagaaggct cccataggcg 4740 aacttcaaag gatgggtcgg atgataatcg gagagttgga atcggcagga cagccgccat 4800 tgtacagcaa gtgagtaggt agtacggaaa aagcatggga ttctttagca tccaaaagct 4860 gcagtgtatg tacacccccg cacatgttca tgtacgtagg gtccagaaaa aagacttgac 4920

cgatgatgag tgcaatatgg ggtcatttgc ctgcacccca cggcccctat aataatattg 4980 t 4981 <210> 3251 2728 <211> <212> DNA <213> Aspergillus nidulans <400> 3251 gcccccggtc tcgcaggcct tccccgacgc cgaagcgtga agcccatcat tgccgccgta aacggatact gtctaggcgg cggcttcgag atggccgtca attgtgacat tgtgatcgcg agcgagaagg cgagcttcgg gctgcccgag gtgcagagag ggatcgccgc ggtggcaggc gctctgcctc ggctggttcg attgataggc aagcagcgcg ccgccgaaat agcqctcagt gggctgccgt tccctgcatc gcagctggag cgctgggggt tggtgaaccg ggtggtggag 300 cacgatcagc tgctagccag tgcggtggaa acagcgaaag ctattgcaag aaacagtccg 360 gacagcctgc gggttacatt ggaaggcttg cattacgggt gggagatggc cagtgtggaa 420 gaggcgagct ccgccctggt cgatgagtgg tatcccaaac tgattgcagg ggagaacttt 480 catgaggggg tcaaggcgtt tgtggaaaag cggcagccaa gatggagggc gagcaatttg 540 tagataccat aaatgatacc ttacgtacta tacagtatcg cgatatcaag atgcgggata 600 ttctgattga tgagcgagta caggcttgta ttacccgctg taccgcattg aaagcgacgt 6.60 attittcaata caggatcccg ctatactgca acaattacgc gatatattca gacatggatg gtctctagtt tcgtagactc acactcagtg gggggttgcc cacatcatcc cacttgagtc 780 ctgcacgacc cgatctcggg caataatcca gttcgattga tggcctgaat ccatcccaat 840 gccatcactt gatagctcgc tatataacag tctcaaacca atctcgccca tccgtcttat gcgaagttet acgaattaac gggactgace agaateeteg etgggeteeg acaaaatggg 960 gtccatacag gtcgaggact tccttggcca aggccaaccg actggagaca gccccaagtc 1020 cttcgagatt gctgacctgg gagctgataa cacatctgcg accggattga aggaagacat 1080 catactcgtg tcttggttta tcgcgctctt gcggacgagg gaaagcagcc aagtcagcta 1140 tgagtgggcg tatggaggcg gggatagtcc aaaacggctg gcgatggagg aattgaagat 1200

tggactccag agcagtgttg aagaggccgc cggtgcggtt tctgactata ttgcgactgt 1260

tgcgactgcc gtggcagaca catctggctc gacttctctc attttgagta acgagtctct 1320 gtcgcagacg gctgaggcga aagatgaggt gagttgcgta tttcggtact taacgagtcc 1380 tgctgacaag aaagggtgtg cttcatctga aactcggctt cgagaatggg cgccttgaga 1440 teegeecaac atggeatace gagaatatge tacegtacae agtateecga tatattaaca 1500 cattcgtcga tgtggttaaa ctatgcattg cgacgccaag tgcgctgatt caggactttt 1560 atctgcgacc gacggacttc gatctagaca gtatctggag ctggaaccac gttctacctc 1620 categiacaa gitetgeatg caegaaatgg tateagagea agetegeagg iteeceegaaa 1680 aagaggcgat ctgctcctgg gacggcagtt tgacatatgg ccaagttgac ctgtattcct 1740 ctttcgtggc ggcctcgttg aaagacttgg gcgtgagggt tcatgatgtc ctccctgcat 1800 gttttgagaa gtcgaggtgg acaattgtcg cggttcttgg gatcatgaaa tcaggagcaa 1860 cgtttgtgct tatggacccg accettccgc ttgcgcggct tcaaaatatc gcgcagcagg 1920 tgggcgcaaa gatgatgttg tcatccagca agcagcacga tctggctacg atgattatgc 1980 cggatagcaa cccttttgtt gttggggaag agacatttgc cgacgcttct aagctgcaga 2040 gtattccgga attggcacca gtgccttcat ccgccctgat gtatatgatc tttacatccg 2100 gtagtacggg gactcctaaa ggtgtgtact catggtagac gcttcaaccc catccgtgtg 2160 tccatcgttg accetectta ggagtcaaac teteteacga aacgtataca ageagegeta 2220 tecetegage tagagaggte ggttacaegg agaactegag ggteettgat ttegegteet 2280 acgetttega egteagtate gaeageatge tteteaceet tggaaaegge gggtgtetet 2340 gcatcccctc tgacgaggac cggatgaatg acattaacgg tgtgatccgc aacatgcgag 2400 ttaactatgc gggtcttacc ccctcggtcg cacgtatttt agatacagac gtaatctcgt 2460 cacttgaggg tettggtett ggaggegagg etgtttegge aagagaetge aeggtetggg 2520 gtaaactcgc aagaattatc atcggatacg gaccttgcga gtgcacgatt ggatgtacag 2580 tgaacggcaa cgctgcaact ggcagggatt atatttccat tggcaagggc aatggagcag 2640 ctatgtggat tacggaccct aacgaccatg aactgctggt gccagtcggt gctgtaggtg 2700 aactgcttgt tgaagggcca atcgtcgg 2728

<210> 3252 <211> 501

<212> <213>	DNA Aspergillus nidulan	3			
<400>	3252	,			
gattgctaag	gtgcatacct catcctca	ge tggeeeteet	tggacttagg	cacgatgact	60
gacgattggc	ttcgacaggg aaagtttg	gc ctttctatca	accctccagt	aatcccttcg	120
tccgacggcg	cgggtgaagt cctgcaaa	c ggctcatccg	tgacatgttt	cagaccaggc	180
gaaaaggttg	ttacgcatct gaccgtcc	ac caagacgata	acgagccggc	tacctttacg	240
gatatcgctg	cgggtctggg acacggtg	ct catggaacgt	tgcggaagta	cgctgttttc	300
catgaaagtt	ctgtggtgaa gatgccga	gt acactgggat	ttcgagaggc	ggcaacactg	360
acatgctcgg	gattgacggc ttggaatg	cg ctttttggac	cgggtctgct	agcgaacgac	420
gagggagttt	caaatgcgcc gagggaaa	gt atgtcttgtc	acgggacgga	gcgttagtgt	.480
tctgcctgag	gtatgtggag t				501
<210> <211> <212> <213>	3253 521 DNA Aspergillus nidulans	3			
<400>	3253				
gagtttacca	ttctcgggct ctatacac	cc agatgcatta	tccctagtga	acgttgtggc	60
aattccattt	catgcacaaa acaattaa	cc caaggctact	tactcgtttt	ccttgcgctt	120
tctagtacct	gagaaaacat ccactgct	t cagtagettg	ttcagatctt	ggatagagta	180
tagtgatcct	taaaactctg agaaataa	t ggtcgtatta	aacgggtctg	gccactgctg	240
cataatacgg	gtatgagtca cacagcate	gc tacatggcat	ataagcttcc	tcaaccgtat	300
cttgtcattt	tgatttgatt tcattgtca	ng tataccttca	agaaactgaa	aatgtcccaa	360
tatgactacc	accttattgg tacaaacad	cc cgctactcca	gtacgtccgc	ctcccctcc	420
ccaaggatcc	tgcccttacg ccgaacgaa	a ctgacatgaa	caggctggac	ggcccgagtt	480
gaaacggtcc	tggagtactt ccaaatcc	g tacacgaatg	a		521
<210> <211> <212> <213>	3254 2713 DNA Aspergillus nidulans	3			

aaaaaaatag aaaaaaatat aataaactgt ttagaaaatt aaaaaaacta aaaaaaataa 60 ctaaaacgaa tacaaaggga aaaaattaaa acctaaacat aaaaaaacaa gagaagaaat 120 acgcttaacg gcagtacacc ctaaagcgaa gctgagcaaa taaacaagct aacgggtgaa 180 aagcacggcc gaaaccatag aaccctggac tactaggtag caaaaatagg gctcgtttca tatctctaga aacgcctcgt acataaggct ggtcttaacc tgtcaatggt tagcttgagg cgcccaggaa ggtcgggttg taaatgcgtg agctcggtag tttagacttt cgtgggctta 360 cgcagttagc aatcgctgcg tggtccattg tcggtttaaa tgtatatatt gttgtcaaca 420 atccacatct atcctacaat tacttgttct gctgattctg aagtgtattt atcatgtaga 480 acacatecaa cecetgetta ggttgeaate eeggtggett agagggeteg egtacattet ctaaaaatat atttactgat atgcctccag ccaaccactt tcatcgaaca tcaaaagtaa 600 acaagagact caactaagac tgatttettt tagacaggat cetteateeg tteactaate 660 gcaatttcaa gtggatagac ggaaataggt tcaccaagac aaggctgacc atcagccttg 720 cggccatcct atgaatagct agtttaatct aacatacatc cgatctagtc gttcagggtc 780 gcagccttgc ctttcctcga atatgtggta taatcttctt tatctatcta aggtgcctct ctggctggct ttctcaatta cttttctgct ttgaaagaga aataatcgac agttttgagt cctcagtacg tctgcattat acaaggtata tgtcgccgct acaccatatt tctacataca accagagtee catecaagee taccagtgee atacatttta ttaccecett acactgette 1020 tectecetta aagacageee taetgttaet gaeetttete eeteagatet eeetteeace 1080 tecegtgtet gaccatgttt gaaaccegee tetgeggege ttgtggegag cetgetaceg 1140 gggttgccgg catttcccag agctggtacg aaacctgtcc ggggtgcgac gcaatcaaca 1200 atggccttac aatgtgtgat gtgtgcatgg aaggcgatga ggagattgaa ggggtctgct 1260 ggaggtgcaa cgatgaagaa tggatccgtt gttcttatga atgtgagaat gggtatgtac 1320 aaagggttga gcggtgtcct agtgagatgc attgtgatca ctgggagtat gaggatgact 1380 gagggtttag ggcattatat ggtagttaag gatccctgtc ttgtcagggc ctaggactct 1440 ttcgatgggc tatcgtcaga tgtatggaga tgtgaataca gtctctgtgc tttgttcctt 1500 ggcctctatc ttccagaagc tcgttctaga tgcacttttt ggtctatcct tgagtctgga 1560

ttattctgca cagaactcac agtccatact gaggaccgga ccttcaaaac catcgaatac 1620 agecegeate tigitatacag gitaacagea taccatacee ettacteacg geatatacga 1680 gcacagatca cccatgtcta gggcatggcg tatacgaggt cgagccacag caagccacgg 1740 cccagagtat gaaacatgca tatgatacag tgagtctcac ggcctcattc gcatatgcgc 1800 caccactcca tgtaaggaga acaaggtggc tctggggcag gaatgggggg cagtggcgaa 1860 tatagatttg cgcatatgat ctacaggtaa ttactggcct tatggtgggg gaatacgagt 1920 aaatggcatg tatagggtca tgcatgccag aaagattttg ttggtagtat gacccttcqc 1980 cctgaagaac attgtagaac aaagccgtct agatttgaga tggtaggcgc cgtgggagag 2040 tgaaccgtag ggtataaata tgcggccgcc gctcatgaaa cctttcttcc tcaagcacaa 2100 caaatcatca catcctgatc tcgctttaga caccatccaa catttcaaga tgaagtatct 2160 cgtcgccctc gttgccgccc tcgggtaagc actccatgtc tattcaagtc ttttttttc 2220 tegttgcaac ataggaeeet getaacettt caatagtete tgtgtetetg gttagttatg 2280 ccagcetegt tteatettee ttegeagetg acateeeaga taccatggee gtgteetgeg 2340 gcgcccaagg aagctccaag ggcgtacgat gcgttgccat caaccagccc tgccccagcg 2400 gtttccggcc tgttttctat gatgatccag ctccctgcta taacaatcag cggtgctgtg 2460 tttgaggtca tggtcagggc ggcgttcact tttgtacgga aactggagaa tgcggtgggt 2520 aaattagtta agaggttcgt gcgtatcgtc acgatttggc ctaggccacg accgggtgtg 2580 gttcgacgcg agattgcgat ttctcttggg gtgtaggtag aggtagtgcg aataggtcat 2640 gcctgttaag tcagcagtgc gtgctagcaa atgaatgata tctgtgtttt cagaacattg 2700 cctgtggtag cag 2713

<210> 3255 <211> 3684

<212> DNA

<213> Aspergillus nidulans

<400> 3255

ttccaaaaca acaaaagtga ggaagacata catcatttct tcgaggaccc tacttagctt 60 ctggtggaag cactgaactt ataagatggt ttgtcagagc tggttgtttc acttgttggg 120 cttggcgaaa ttctaaggga atcgtgtaag gcacaccgtc ttctctgctt cctcggccca 180

atcaatttta ctgatagatt gataagtata taggtacatt gtagtttctc gagtggtctg 240 cagtcttggg agatggatag atcagggtgg tgtgttgtaa ttggagttta gagccgattt ggagaagatg gacaagaaaa gaggagagga gagaagttca gggaaggatc atgtgagctg accatgtaat tgaaatatct ccgtctttga attgtggtgt tatgcaaagg aaaggcttgt caaggactca gagcccagac actacaagta tgacctttaa attcaatata tcatgtcctt 480 ctcctttggt attcttcttc gtatttaact gatgcttttc tctaatgaca gagagctgtt 540 ataggtacct ctagatactt ctagagtgat ttccttccaa cctgtcacga cgagcttctc 600 aacgagcttc tcaagccacc tgggcagctc tagatgcaga tctgcatgat cgatcgcttg 660 tggagactac gatgacgatc accaagccgc ggccgactat ctgacaacta taaaggccgg ctccccgcag aatccaatgg agtccacatc aatttcaacc acctatttat catgaaatcc cttattacct ccctcccc ageggetacg ctcattcacg cageegecat ttggccaacg 840 cattcatttc acacaaccga tacaaacaca cccatcctca acatcaccaa attcggccca 900 acagececeg getteetett categeecee tecaetagea eeggeggete acetgegate tacgccgaca ccggcgacct ggtctggcac gggcccgagg gcaaaacata cgcctaccag 1020 ccacagacac tgcacggtga gccagctctc accttctggc agggccataa cgtcaagggc 1080 ttcgggtacc gccatatcag catcctacat gcgtcgaatg aggaaatcca ccgcgtaacc 1140 ttgccggggt caaaagatag ttcattcgtt acagcgacga atgagtcgtt tccgtcttat 1200 atcgacattc atgagagcgc gattacagag cacggaacaa ttctggtgac ggctgtaaac 1260 gtgacgcaga cggatttgac gtttgttggt ggcgagcgcg atgggtgggt ccaggatgga 1320 ctggtgtatg agattgacat cgagaccaac gaggtcttgt tccggtggag tgctgttgaa 1380 catagegage agttgeeett ggagtatgtg gagtateeae teaatgatge ggggagaaae 1440 agetetgice egiaegaaig teegeaeeig aacteegiag eeaagiaegg egataeatat 1500 ctcgtttcgt cgaggtacat gtgtagtatc tttctgcttg ataaaaaggg tgatctggtt 1560 tggttactcc atgtatgccc gtgcctgccc taaccttgcc tcaatggaac gagctaacag 1620 gtacgtccag ggacaaaaag gaggcacata taccctcccc tcaaccccag gctcaacctt 1680 ctgctaccaa cacgacgcgc gcatccacgc acacacatac cccgggcacc ccaatgagac 1740 gataaccete teaetteaca ataacgacaa cacagatgee accatteege geegtetgae 1800

aaccgggtta gtctttaacc tgcacccatt caacaaatca gctacgctga tatcccgcac 1860 ctacgatgcc cgggatcctg tctcggccgt gtcccagggg aactaccagg tccttccttc 1920 taacggaact ggagctggac ttggagggta ctatgtggcg ggccatggcg ctgtaccgaa 1980 gatcgaggag tatgattctg ccgggaaggt tgtcatgagg gggtggttcg gtgcgaagat 2040 cgagaataca agtacgagta gctatgattg gacttcttat cggggctata gagaaaattg 2100 ggttgggaga cccagaagtc gtcctagtat ttttgcttgt cgggaagagg atgaacagaa 2160 ggttgatgtt tgggtgagct ggaacggggc cacagatgta aaggggtgga ggatttatgg 2220 gctgagctcg agttctaaag gggaaagaat gagggtcttg cgggacgtgg cgaagagtgg 2280 gtttgagacg agggctgtgc ttggggctga tattgacgat attgaagtta gggagggcag 2340 tgtggatgtg atcatagtgg aagctattgg aggtgttggg gaaggcgcca agagtgaggc 2400 tgtacgtgtt gggtcctgct ctacgcagta aaagtgagga tgtgctatag gtaactatga 2460 gagcaaccac taaatattca tcctaggcag acgccaatgg attatattaa gtgccttgaa 2520 gccatagatg ggtgcatgca gaaagtatct tagtataata catggcgtac aacaaagagg 2580 ggtataaaca aggcacaagg caaacgcaac catagagacg accaataatg ataacttata 2640 gettagatgt aagtgeette eteegeggeg eeetggtega cacategaca teaacateag 2700 tagegggege aeggetetet gegetetega acaaegteeg gecaacattg teagacatag 2760 tcaggacccg cgaagaaaca gtggcgccgt ctcggcggtt tttcctgcac agaatcagct 2820 tacatgcacg atagggctta aacgataaga aagctaatag ttaaacaagg cacgtacccc 2880 tcacgtctag acttcgcaat caactccata aagtcccaaa gacggccttg cgggaggagt 2940 ttcccggtat ctgggtcccg ctctggcgtc cactctgggg cgagtctcat tttcgtggac 3000 gageggtttt etttgetett tgegaegatg atgatgeett eetetgegaa aeggtegtae 3060 gagtttttaa gggcttcttt gttgacggct tcgaaatagg agaggtcacc ctggtggtag 3120 agagttttgc cgagctatgg atgttagcga gggctgagac ttgaaggaat agagctgcat 3180 actaattgtg cattgttctg cgccttgctt aagttgatcc atacgtcctt tggaccgttt 3240 aagggcggag taagccctag caaggacaca gtgccgagcc acgaggcttc aatgaacggc 3300 caaatgagga agcagtagaa atcgtagttc tcgcgtccgc attgacgctc tgtttctgag 3360 agttegatga actgtggtge gecegtggaa tetetggtga ttgecaggae ttgatettte 3420

tcgagggtcc gcaaggtgtt ctccaaatta gtagtgagac cttcaggagg gaatatgaat 3480 tcgccgcgga agagctgttc cgattagtat gcgtgtcgta ggaggtgatg tcaatggaga 3540 acgtacctga gatagaaagg taacatgatg caagagatcg ccatatgata ttcgttggtg 3600 tgcgggtccg cctccttgct taacctttgt gtacatcgct gccgacacaa gcgcctcaaa 3660 atgaataggt ggatggtcat attc 3684 <210> 3256 <211> 691 <212> DNA <213> Aspergillus nidulans <400> 3256 tactgtatcc ctactcctat ggggattctg ccgcctccgc ctctaccacg cgcctctttt 60 cgcaaccaca tcatgcccta caacactcgt cgcaagtcct tgtctcttcc tctattggga atteatette caaacacate tegeogetee cettetacat caaaacegee teacgegace 180 gacgagaata ctcctccttc caaaaaggtt aagagatcgc acgactcggc gtcgacgtcg ccagagccta cagaccgtgg ctcaaatcca agcagaccct cggccactgt tcgtccatct 300 ggtcgacgcg cgacactgga acaaacacct ccccagtccc ctactgacgg tggtgtcgca 360 tccaagatcg acctcgatgg gataaacgac gatatcgtgg tgggcgtgat tgagcagttg 420 gaaaagacgg ctaatcgccc acatttggtc aaagagctgg ctgcggtcct cattacatct 480 aacgataatg tggcaaagta agtttcaccc tcatcccctt cggcgcagca atagagctaa 540 cegttgegte tettgettag tteegegaac cetgetgeet tattgtette tegeetgage 600 gcttatatga agcgtcattg gacggcactg gcgccatgcc ccttggctaa ggagctcatt 660 691 cctatacacc cgcgaaaggt gtagttctta g <210> 3257 <211> 2387 <212> DNA <213> Aspergillus nidulans <400> 3257 ccaaacgcag aagctaaagg aagtgctgtg gtggtgtatc gaactcgagg atcgacgacc 60 gateegteae tggteeaata taggttetgg tgeatatgtt etataattga geettgagte

catcacgctg tttttggttg tcatcatctc tattggggcg tttcttggtc catgtgctct ctaaaattgc atttctcgcc atttgccgcc gtcgcaatat gataccttga tgaaagagtc ttattatagt gcagcaggta caaaccataa attttttgta aatatgtctt ttatcaattg 300 gaaacagaat aggaacaact ttatttacac attggccaca aacagtccgg ggggcagctt 360 gagagaatcc aactgatgga aaaacctcaa aacagattta ccggggagca gcaacggggt 420 tccaagctgt atacttgggc ttggtactag aagagcaacg cggttattta aatgttcgat 480 acgcggctcg tggaatgtcc tcaatggtgt acttacgtcg aataggtctt gaatgcagcg 540 cggctcagag tcaaagtcgg tctgtgctcc cgcagctccc agggtcgaac accaagctgc 600 atgatettgt catttgtggg aggaatgteg accatgtaeg agatecagge gtgeetgeae cgagtcagta cggaagatct tatgctgatt tgagagtaag gattcctcac cagccaggct caatctggga ggggtcgtat tctttctgct tgtaatcaac ccagcgagtt cggacttcat tcagtcagcg ccaccagttg aagtgaattg cgctcgaatt caactcacgg ggaagttctt 840 cttccatatt ctcgtagtac ttgttgccgt agcggtcggt gccgattaga gtaccggctt tggtatcacc tggaattgta ttgcgtcagt cgctggccgg ttcggagcag aggggtaaag 960 ataggaagcc ataccgatgt actatatgcc cattgcccag tattagtatc acgacacaca 1020 gaatatacac cctaagatca accaccgcaa gagtgagaac tgcatacctg catttggtgg 1080 ccatattcct atacgtaaaa aggacgttag caatcgtgca gtacctattg gcgcagctgt 1140 tteggtegea gtatageeea eettgaagee aattettetg agatttegea aggtteggag 1200 aatagtcgac atcttgggcg atgcgctgtt tgtggagctt gattcaagca aaccaagagt 1260 atgtatgtcg tcgtcctcct gggtagtcgg gttccgttct gtaagttgta aaggcctgat 1320 ccggcctagc ggcagactat gtttgcactg tttgcacact gtacataatt ggccgcggag 1380 gacaagaaag tattccatat gcttgaggtc tgtcgcaatt gtcgttgaaa tctgcttttt 1440 gctgggctgt ggcgcttgca ttatagcaca catatacgat gttcgggcgt cttggtggca 1500 atacacteeg gtgegetgeg egeageeeeg tggtgeggeg gaggttetgg gagegeaget 1560 tttcatcgca tataccgtcc ccaacaggta caactgctcc ttcaagtgcg tcaccgctag 1620 gaagtattac gacggagctg gatcggatat cgccatgctt tgaggttccc gcgtcgcgga 1680 tatecattet ggaeteteet gegagttttt attetaeget eaaggtgege aetggteeta 1740

ttatgacgac gagcgagggc taatccgagg gtatcatatc ggcgcttaga aaaaaatccg 1800
aaaagctcga aaacgcatct tcctttctac gttatatatc ggcaaaacgg aatatgaatt 1860
gattcaaacc atcaaccaag ctcttcgcga caaccccgat ctgcgagtct cgatcctcac 1920
cgatgctttg cgagggactc gagagtcgcc gaacccctcg tgtgcttctc ttctagcgtc 1980
actagtcgca gaacatggac cggaccgggt cgatattcgg atgttcata caccgaattt 2040
gactgggttg cggaagagat ggattcctcg acggataaat gagggctggg ggctgcagca 2100
tatgaagcta tacggtttcg acgacgaaat tattctctct gggtgagtgc ttgctgttag 2160
aaaacaaaga ctcggtgact aacgaccgca cagggcaaac ctctcaaatg actattcac 2220
gaatcggtta gatcgttatc atgtgttcaa ctcgaaggaa ttggctgat actatgcgcg 2280
cattcacgat gcagtctgca gcctcagctt taaagtcctt cacgatcctc acaataaggc 2340
cggatacgtt ctccagtggc ctagtgctaa tagtgctga tctactt 2387

<210> 3258 <211> 1269 <212> DNA

<213> Aspergillus nidulans

<400> 3258

tecgaattgt gttgttegeg gateaggttt agtetgatge eteegtegeg teagettega 60 gtctaatatt tatctctgct gtagtgattt gttagtgtca tatggctcca caaacagagg gcgcgaggaa tcatcgaatg tccccgcgtg cttcatccaa ggaaccaatg gccatactgt atgeetegaa catgaagtge atttgtegte atattteaat ateeggeeae tatttgaggt agcgattaat cttcatgaca tctaatccct cagatcattc ctctgcttgc catgggggtt 300 ctcacattgc ccgccaagcc cgcagcctgt gcctttctga cgagcatacg ttgcgaccca 360 gatatagacc aagggctgta ttaccgcgaa cacattttca aaggcggaaa tatgggattt 420 tcaagacgtc aagataccaa ctattcttct gggcgccgtc gtgacgtcgc tccgaacatg 480 ccgtccgatg ttgtctgttt aaccctaccc gaaacgcagc ataaagtaca aacagtattg 540 atcgagatag tagctcaaac cgctctttga gcagagacat aactaaagcc tagttcttag 600 tttataaagc tttatgttaa acggtttttt ggacgtcttt atatgatctt tccttgccac 660 gatatttgag gtcaaatttc tcagcggaga cacttcactg ttcgtataac ttgactatat 720

gatgtcgcct ggttgttcgc aaatgcatat gagaagaga cattagcggc ttccgccagc 780
aagcggtccc aagccttcag cccttcttct gaggcgtcat cacgtggcaa gttataagac 840
gcagtaagtt tataacccct attctgaggt atgctcatac aagccatgct catgcaagcc 900
gtgcatgcct gcctcgtcaa tggccgatgc tgtagcatca aggcgccttt tagccggtca 960
gtccttcttt cgcgtcgcca cgaaaccacc ggcttatttt tcctgctaag ccccgctcca 1020
ctgaacacac gtatgctcgc ctttcgtttg aatacaacta ttctgagcga aagagacagg 1080
ctttgtgcat tcctggacct cgatttgatc aggacgcact gaatcttgga aggttaaact 1140
cgagctgaat gcaacatctt ctgcactctc tttaccagac tcttctcgaa ttgctccacg 1200
ccatcatccc tgaccggtat agtaccagct ttcatacgta gacgactggc cgcgggagc 1260
ttcatattg 1269

<210> 3259 <211> 4022 <212> DNA

<213> Aspergillus nidulans

<400> 3259

aaaaaagaat gtaattegae agtttegatt eatgtteaaa gaetatteaa eggttagaae gtagctcaac cgtcaacata cataaattga aacaggacgg attgatagac cgaaaatctg gtgtataaat acattgaacg gggtataaaa ggaacagaat aaggtatggc ttacaattca 180 gtcttgtcag agttgcgctt ttttgttttt gtttctggca tgaagccttc cagttccatc 240 cacteggeag caaaaccage aattagaaga etecaateet etacegtgte gatateeagg 300 tgttcagcat cgtccttgat ggtgtgccag acacttggaa atccaccgcg cgtgggcgag 360 tagtcgatga cgtgcaggac gtccactcca cgtttgagga atgggacatg gtcatccccc 420 aagctaccat aataagataa ttgccgctca tttgttgagc tgtcaggaaa ccaggtctcg 480 ccgttcgact tgaacatctt tagatcccta aggcgacgtt caacattcgc cagcttctga 540 taggcccagt gcgttgttcg ataataagag cgaattattg ggtttttgga acccagtaag 600 tccaagagaa cgaacaggga tatggatgaa agcggcgttt tgtagaccga tattgctgga tttacttcag aatcccagtg ttgcgcaagt gagcgagccc catacaaaga atcagtgtca gtccatgctt taaaggcttc ttcgccgtcc agaaaaggat ctggattccg tggtactcga

gataatcgtc aggagagccg gattcccatt tctttgtcaa ggcctcgtcg atactgcgca 840 tegeatgeat aateategeg eaeggageag egetateaat ggeteegata aageetttag gctcgtattt actatcgtaa tgggcgacga gggtcaatct tcccacatcg cccttggctg 960 cgaagggagg atcccgatag gcgatgaagt tcacaaaagg gacctccttt ccatccgaca 1020 caggogtogt agaagttgag ttotgaaact cgacgttoca ottogggagt gagttoogga 1080 agaaatcgac aaaatgatta agaaccgccg tagatccagc agttcctggg acacgaggga 1140 taagaatggg cgagaggatg gcgccgtcgt ggatatcaaa gtcctttccc ggccggggaa 1200 gegeetttag ggeegetet gaeaegteee gatatgegee aetgagegga agaaaataeg 1260. aaacggcaag ccataccgag agcagtgggc gaagcccacc ctgggaagcg aacctcatcg 1320 cgtctggcga agagaagtta cgggagttgt agagagataa tcgttggtgc gacttggaag 1380 ttgtccaaat gtctcctgta acccactaag cctaattaga cagtcagcag ccaagcccgc 1440 ggcgatcggt tcagcttca gttcagcttc aactttccgc tttctgcgga ctatacccc 1500 gcttaaagag ctccaaaggg cagttctttt tgcaattgcg gttgtcatcc acttttcagc 1560 aaaataattt tgctcaaata tattcaagat gagggtatcc gtcctgctcc atcctcaggt 1620 gegeteegeg etteeeegge etgtgeggag agagetttge ageagtttge tatttacteg 1680 atacaagacg actggcacta cgggtcatcc tcctaagaat gcaaacgcgc ctcagaaacc 1740 agaatatega eeegteaatg etecaeggae eeegcaacea teetecaeae atgegaagae 1800 tgccctgcga agaggtgaca ctcgaaaccg caaagatcaa ttgaagcagt gctgatattg 1860 cttgcaggac cccccgagag gatactaatc taccatggag gaaccggccg tactatgttc 1920 cttgggatgc tgcggataac gaccatcttt ctgttcgggg tttctgtctt agtggttgct 1980 ccagcettea tgtetteega ettteegtgg tatetaggee eagetagtaa ggacaettte 2040 ccgcgcaggc gcaatcattt tttactaaca cacatctcac tagttgtcgt tggtggtgcc 2100 ttgcctatgc tattcgtatc ttatacatcc gccccctacg tgaactttgt ccaccttgcc 2160 ttgcccattt ctgttcggcg atcgcgagaa caagctgttc agtatgcaaa gaaactcccc 2220 ccaaccgcta cgttgtatat aaacaccatg aagttcaata ctattccgag acagaccgag 2280 gtgcgactgg ccgatctcgt cccggacaag tccaagatcc gtcccgtgag ttttcgaaac 2340 cagaaccctg ccccatcgcc ctggtggagg ggaaagactc tgcagcagtt ttacacagca 2400

gagaaaagca agcccggaaa ggactcgagg accttttatc cagagctgtg ggagcacgtt 2460 tacaaacaga tacagagccg ctcagtgaaa ggcaattgaa atcactattt ccagagccat 2520 ttgccaatgt agctgtaact ccggcatctt atctttgccc tcactgatgc cagtagctcg 2580 agtggccttt tcccacaatc tgctcactcg caggttgagc ccgggggctg gctagagagc 2640 ataaacacaa tagctcagtt gcgcaaatgg ttttgtgtta acgactttca aaccttcatt 2700 cacctcacct ataccttcta ataacttgac tttctgtttg ctcatattca ccatcctgtt 2760 tecttectee atteteetta taagtateeg teeteaaget eatteeteaa acteeaatte 2820 teettgeaag catecageet teaaactete ateettaage tgeteeatte aateageaat 2880 ggcggctgct ggcaaaggaa aatctgaggg ccttttaggt attactcaaa gcgacgccag 2940 gatteteett etgggeatee teteegeaga caaegeaggg aaggtaggtt acaeetateg 3000 gcaattttac atgcgacaaa acatatctta ccggcaccta gacggcatat acggcatata 3060 cgataacatc tgataacacc tagattgatt tcaagaaact ctctgttatt gctccctaca 3120 aaaaccctgc accgcttaca gcgcgtaccg tcaggcaagg aagaggtttt atgctgcaaa 3180 tggcactgta gatcccagtt catctggggc gcaggcaact ccgcccaaga aagccccggc 3240 gaagaaaaag ggcgccgctg cggctgtcga cagtgattct gccaacgaaa atgacgattc 3300 ccttgtcgaa ggcgcagagc ctgtctctcc atctccgact cccaaaccaa agcgccagcg 3360 caagaccgcc cccaagccgc aagttgttat cgagaacgaa gctgaaatgg atcagtaagt 3420 atggcaacct tecteegtgt ttaggtegae cattgttttt ettggaaaae acageaeegg 3480 gcccgattat gtattgatat aatacagtga ctctgacgat tcctccctca agcctgagca 3540 gaaacagete gaggeagace teaceaaege cateaaagee gagggeeaat acaceceaag 3600 acttcatcgc tggaaaaccg atgaagaaca aatcatgacg gacatcaacc tcgatgctga 3660 attcgaggaa atggagcgca acaagcagtt atctgaagcc cggcgtagca gtgcaaagct 3720 tgctcctttg cctgaatagg tggtccaggg ctttgcatct agaacacttg tctgctccag 3780 ggctggaagc tagtaacgag gcttgaattc gttggtttag ttctttcgta tgatgcgcgc 3840 cgctttttcc cttccccttt tcctttcttt cgggttgtgc ttacggatgg ggaggacggg 3900 catgetttte getggatatg gggatattgt etactecatt egatagteet ttggttgttt 3960 tctctattgt tgcacttcgg ggcccgtcga ccaagctcgc tcagtttgtt cgtttcaaaa 4020

ca 4022

<21U>	3200
<211>	2167
<212>	DNA
<213>	Aspergillus nidulans
<223>	unsure at all n locations
<400>	3260

catatcccca teettaactt taggeggatg aactetatat tetecaatte teaacagege 60 gctgtacctc tcatcagtag ccaggacctt ttcttgtgac tgacaacatt ctctttgttt 120 atcaagttct gttggtattc ttctgtaaaa ccacatactt ctgcaaactt ctgaagtcgc 180 tcaagtttct tatatctcaa atcctccttg gacagggcca tctggtcacg tgagtaatga agatagggca aagtaacaaa gatgaaggta aaagtatcaa atatacagtt caaaagcatt 300 ggataaaagt caaagagccc tcgctattta tgttcagctt ggagagatca tagtagtggc 360 ctaagtttta gttctcaccc atctcaccct tctcacccc ccgctcactc aggtgggtga 420 tatteteace tigiteteac ceateteace tgeacecace etagiettag igieteteac 480 540 ccctaaaagc agcagcacac tcagggctcg ttgcactttt atccgcgttg ataattgtgg cttaagtacg gctgagcgga cgggaagccc tgttttctac accctgtggt cgtatgtact 600 catctagtct ggattattca tcatatggaa cattgtttt tggccggtct tatgcacttc 660 ctggcgaaat ggatgcgggc ccggcctagc tgtagcctgt gggtgcagtt ccgcactcag 720 tagttgagta gcggatcgga atcgcatatt gtttgcattg tgtcccaatg cagcgaaacg 780 geagggetge gacagattat aaagetetae tgtaaataca aagetgetge aaeggettgg 840 cacgaatcca accagcacgc tatggccaac aagcagacct ttgaaagtcc cgactaccac attcaggcca agaagactat gacagctcca gtaacgcttt ggctcagact tctacagctc aaggagggag ccgagttggg ggtcgcagtc gtggcgctgc caggacttga actgctggtc 1020 gagaacgaca aggagacata ctgctggagt ctagttgacg gtagagagtc ggctaagcta 1080 gttacacctc gcaaatagcc actgctatct cgatgggtac atgctcgtcg atcacagcct 1140 gaaccatttc agtttcattg agaacgcgtc atccatggac tttaggtata attccttgga 1200 atagcgagaa tctaaactcg tatcatctgt tgcccctgta agtagacgtg attcacaggc 1260

gtagagcatt tatatagtcg aaagcttgtc ctagggaggt gtatcaagaa cagcattcag 1320 atatttccgg agctttgaat tgtcaacatc ttattcccag cacttccccc gggccgacgt 1380 gcagccacag ccgtacagag accatcagtc atttgcagca atggtacgag tattaaccct 1440 aagtggggca ccaacattgg tggtttcagc atattgtacg tttgcaaaga ctactctgat 1500 atatteggae geagetaagt gagetaacat atgaggetta ageeetgeae ttegtttete 1560 cgtcgagcgg ctctgagctt gatctctccg gaacgacaaa tgtcgaatgg tcgtcctctg 1620 agtgagattc ccttctgagg ctaaaggcat gaaatacctg ctaacgcata cagccccgac 1680 ctatctacct tcaacctcta tcttttgaaa aaaagaacga agttcccagc atcaacctca 1740 agagtgcatc caatctcacc acgtccgatg aggagcacac ctttgacggc gccgacattt 1800 tgccggggta cgttcqcttt tcctctttcc atttttcctc qccqttccac qctacqacca 1860 gcgtaatcaa tccttqcqcc tqatactcqa taacacatqa accqqttcat caaqcqctaa 1920 cacgtttgaa cacagttctg gatatatctt caacttgaaa gacgcctcca acaacatcct 1980 cgccagttcg acgaattcac cgtgtctcga taattgaaca tcattgctat gtatttatag 2040 atgagecett etattaacea egeetngtaa agttetttgt gaagacatee ggatgacata 2100 tatgccctga gaagagtcaa agcggaatgg gcccacctca gttttattgc tagcatatng 2160 ccactaa 2167

<210> 3261 <211> 3711 <212> DNA

<213> Aspergillus nidulans

<400> 3261

tegetgeegt ageageetat gteggagaag cecagateat eggegaegat gacaaggaag 60

tttgggegtt tgactggage cateettggt gttgtettgg tggtgtetgg ggeaatgagg 120

etggagttet aaaceeacea teatgaaget gagategett gtatatagtt etaceatgat 180

geecategte tateggetgt eggeagetat aacagtattg gaeggtttte eagaetetea 240

agaetteate aaggggaaag eegatggtge eatettgege eateteggee gteggetgea 300

ttacettttg gaggtataaa tgegegteae ttaacaaaae ateaggaeag aacttacaga 360

ageaatatae atatttgtat aacaaaaaaa aaacegatae aateagaege teaaggtget 420

aaaataaaag ggagacatga aataaaaata aaatgacaag gacgagattc gaactcgcga 480 ggtttcccac tgcggatttt ataggtaata atacctaaac acagcgcctt aaccactcgg 540 ccaccttgcc tttattatgt tatatgctca ttagtattag tacatattaa aataagtaaa 600 gtaaactgcg gattactcct agcacgtggc gtccttccag gagtatacga cgacgtcaac 660 aaccttcaac agtctatcca tcttactgaa gccctcagct ggtctgcgag gccttccaca 720 cagaagtaca gtagcagtca tggcttccta caaccatata tcccaagagc ccgactccaa 780 cactttatcc gactcccgtc cttccaacaq taqtcaatcq ttacqaatac accttqatta 840 cctccgcatt tactacctcg cagccgtcgt ctgtgccggc ggtctgctct ttggctatga ctctggtgta attggtttag tctctctttt ctcagctcta ccatgtttaa tgcggtccgt 960 taataagece gttaggagge gteeteaegt teeetteett egeagaette ttetaeeeea 1020 gcgccagcac caaccaaagt gagacagata tcagcgcact cgccgtagcc acccagcaag 1080 ctggcgcact cctaggctgt ctggtcattt ggccggtgac aaactctgtc ggccgccgaa 1140 aagcactage cetetgetee eteacettet geateggegt gettttegaa atecteacee 1200 tecattecet tgegetette tacaceggee gtateatege eggeetegge gteggeggtt 1260 ccacgaccgt cgcgccaata tacctcgccg agatgagtcc tcctcatctc cggggcagac 1320 tgggcagtgg gtaccagttt acctttacaa tcggtatctt cgcgagctac tggatagatt 1380 atgcgtttcg gctgctggtg gatgacgcga actcggcgca gtggcgggtt ccacttgccc 1440 tgcagcttgt tcctggtgtt ctgatgggtg caggcgtact gagtctcccg gagagcgtgc 1500 ggtggctcct tggtcgagga gaaacacata cgcatgaggc atggaacagt cttgtttggg 1560 ttcgaggcag tgatcaagga ggccgcgtgg gtgacgaatt cgccgacatg aaacgcgctg 1620 tgcaccgcga tacagaagaa tcagccgact ttcacccgcg cgagcttctc ctccqtccga 1680 accyccatcy catctteete getytyteee tytttatege geageaggee acaggegeaa 1740 cggcaatggc gtactttgga cctcagtttt tcagcatttt agttaaccca aaccctcagc 1800 cctccgaagc agcatcagca tcatccaatt ccttaactct cctcttaaca ggaatctttg 1860 gegeeettaa ggteeteage tgeetateat ttateetttt tattgeagae egetteggee 1920 gccgaccact tctcatattt ggggctctgg gaatggcatt ctgcatgatt gcaacttctg 1980 ttettgtaca tteaatgeet atteaggace aaaaateeet eateeaceat ateageaaag 2040

tccctaacaa caatcctcct aatatacctc tttattgtga tctacaacac atcctggggt 2100 ccgcttccct ggccgctcgt cgcagagctc ttcccgaccc ggacacgctc aagcggagtg 2160 gccctcgcag ttgcaagcca gtgggcgagt aacctcgtat ggtcatttgc gaccccgttt 2220 atactgaggg atgtgggtgc aaatactttt ttgctgtttg gaggcgtctg tgtgggggct 2280 gcgggattcg ttagactttg tgtgccggaa acgagggggt taagccttga ggaggtgcaa 2340 gggttgttcg aagaggttgg tgggggggtt gaggttgcgc atagagatgg gggaagagat 2400 gatggggccg agtgggagcg tcttgtcgac gggagtgagg gtggtgggac tgattatcat 2460 ggggagggtt ctttaggfgt gaacgatgag gacgggaaat gagtagatat ggcccgaacg 2520 cgctagtaaa taggtttgtg catatattac ttcctggtac atatttcaga cgatatagtt 2580 cactgagatg ctagactaaa tacatggcat aqqccqaaca aaagctaagt attcgtgctc 2640 gtgattgaaa ataaactgca aatcettcat ccctgactcc aaactccaga acgaaaataa 2700 aagtacacac ccgcttgcta agcgaacccg ccaatatgtc actgagccgg tcgattccca 2760 acgctttttt acgaccagcg gccaaactcc ggtgtaagta agctcattat tcgtcaattg 2820 gtcctccagg gcaccaatgt agtaacacac cgtcaaatgc agacgaaaag cacgatatca 2880 tgccgtcggt gggtggacat caaagccaaa tccactaggc tttcgctccg agtggcatcc 2940 gtactgtgcc ggggctgtcc caaaatcgaa ttgctcatgc tgaatggaga tgttcttcgc 3000 catgttttgg atgtacgctt tgatggattc gtggccacat tcggagtgtg caagaagctg 3060 atcettggcc accaegatag egteecteaa egagtteaca gtgegagtga geteetegtt 3120 cttcatcttc tcctgctcgt acctggtctc caacatatgg ttctgctcct tcttcttctg 3180 teggeactig etggeegeaa gieggiteeg igetetagie itetetigit tateateace 3240 gggcgacgta ggctcgaccg aggttgaggc ccgagtgctg cctcgactgc cactcatgtt 3300 gctagaaccg ctccttctgc gctttggcgg ggactcagat gagccttcaa tggtggacgg 3360 gagatatgct gacttagagt cgtgggaagg aacggagtag acggtgctgg gagaatggtc 3420 tgaaggaggg gtgacttgac catggcggac ccggtaagaa ccctggtcaa gctcagtttc 3480 ggccgagctt cgcctgcgat tgctcgggcc ttgcttgtga ttcaqttcqt caaaqqqatq 3540 attggtaagg taggaatgca cgtcactggc accgcccgcg gcgatgcatg acggattaat 3600 agtaggatga gtggtcggat gaggagccca catattgtct cagagaggct qaaaggattg 3660

<210>	3262	
<211>	1964	
<212>	DNA	
<213>	Aspergillus	nidulans

3262

<400>

accacggagg tggccctttt gaggtcacat ttttctatcc ctcatttgtt gtgccacccc 60 accaggcagt ttttgatgga aacattatcc ctctccgtcc caaatcacat gttcgtgcga gcccaaaata tgacaactat gtacgactta ctaaggttcc ccggcgatcg tctttcaata 180 tetecectae etaegttigt gggteagete atgattiegt titleettatt eteteetget 240 ccagcttcat cttcatgcct tcttgtgcct tgcttacttc ccccacctgt cttcattatt 300 360 tagagettaa tgtttcatet catgtacatg tacetaatag ttagcaggea aatgageegg catgacagcc atgtgaagtg gcatatataa gtgaactaca gcgtgcagtg cactctggct 420 ctcatatcga ggaacggaat ggtgtaggtc cggagtaagc ttttgctcta ctatacgatc 480 ctattcatgc tttggcttca aattagccgt cgcaggtatc ttacctaacc gcagcaaatg 540 ctgagacgaa tagcctcctt ttacctcaga agctggactc agaaacatgg gtctaatcag 600 ttcgatgtct gcttggagaa aggtaatcca tctactccgt attgtcgcta gtgcatgact 660 gtactggagg cgccgttgta gagaatggta ttcaggtcta tgtaaatcgg atatgtcaca 720 780 gaagaataat cctctttggg tgccctattt acggactccg actgagcttg gcacgggtga gaaaactacg tagcctgctt tttggccatc tgatttgtaa agactcagtg ccagttgcgg 840 cggtgaacgc tgtagctccc tcttgggtcg aagatgaagt ctcgacgtct gaagtttccg acacgtttag ggacccccag ctcccggctt tgctgttgct gcctctcatg tcttccctgc tccaactgag tcctgataat gctaactgca gagcggaagc cgctgtcttg agggacagcg 1020 actttagccc caattccaag ggccggctcg ctcatggtgg tctctcttac tagtttcatc 1080 aactcgtctt tcccatctac acggcgagtc aagtaaacca tgggtacgct gcccttgcct 1140 tetttteetg gaagggtate tgetegaatg egeteaattt eetgteggta egeegttteg 1200 tatatatcga agtcggcggc gcctggtgat tcgctcacga caggatagtc aggttctgtg 1260 ggatctgtct cggccccaac cattgggacg tttgaattta ggggcttggg ggatacgtcg 1320

gggcagtctt cttccagggg atctcgtcg tgtcctcgtg tgccttctat gctgcgtttg 1440
gtggtcgtcg agctagtgcg tgagagcggg atctgcgatg actttcct tgttggtctg 1500
attgggtcgt ccctaatttt gacacttcgt attgagccgg aatctttcct tgttggtctg 1560
tttaaaatag agctgtacgc agaacccgat tcgccgctct ctggcgcagg acaagggaga 1620
gcttcccgcc gctgcgggtg atatccttta acaacatcgt cacgctccca agctctccgg 1680
ttataagtgt tcaaactttg ggttttttg tatggtaaag gactaggcaa ggatacgctc 1740
tcctcaggat ccatttgcgt aggaggttcc acaaagtgcg tctcgtattc ttggccgagg 1800
atactttgta tgggtgtaga agctcgagtc gggccaagaa ggcttttaaa tttcttcgca 1860
gctttcatct aaactccgt taaatttagc cattagatag aacacacagg acataccacg 1920
gctaaagacat ggccaaaatt gtttgtattg cgaagtacat ttcg 1760

<210> 3263

<211> 1011

<212> DNA

<213> Aspergillus nidulans

<400> 3263

tctaagatcc gtgactgctc ttaatgtatt gtaatgacag acttgagttt gtttccagca 60 tttgcaggcg cttgttgacc gatttgaaaa aagattcctg tgttgtcggg tttgcggacg geggttgegt tgtagttgtt egtattgaet eaacaceetg eteateteta gaggeagetg 180 tagaacgagt atcttggtca gaagtggcat tgtgagaatc tgtttctgac gaagcccgac 240 cggaggcggc agtatccgca gtattaggag gattgacacc agaagagcct gaggctttat 300 aatctccagc ctcaggagaa gcagccttgg cagcattgcc agctgaaggt ataactggac ttgatgaagt tttgctaagc actgagttat tccctcagtc gcgggcgact ctccgaggtg 420 tcattgatgc cacacgtttg aggattcact gaaccgagca atgccagctc aacactagta 480 caaattcggg gacatatttt tgacgggcgt atttcagagt tgacgacgtg aaaacttggt 540 gcctccggcg gcggcacttc agtcttcgtg gcatcttccg tgacagtctc tgtctctaaa 600 getggttetg ceacacetee agetaattet teeteagete tatteacete teeategtge 660 ttgtattctt ccaacattgt cgtcccgtga acacgaatta aactaagcgg acagtaaaac 720

tegtttecat aatgegttag aaactegatt egeaagtate gegeecaaat aagegggtte 780
teaactgega aggettgtat etegegagta tteetegetg cataaateee gageteette 840
cattgetetg gettegeagg gtageggtet gegacactga egeggaaagt gtggaagate 900
gagetgaege actegtagtt ggegagaaca acagtaacae accagaatat categeatag 960
etegagaate aaaaacttae tetgtgeaeg acacegaaca geatatggta a 1011

- <210> 3264 <211> 3002
- <212> DNA
- <213> Aspergillus nidulans
- <400> 3264

atgtegeett gattteetta ttteaaggat gtagateate etagtgteet eggeteeegt 60 gttataagca gcgcgaaagc cataggaact gccaggatta ttggcctaag cttttgggtt 120 tgtcgcaaag gttgagtcga ggatgttgca atcttctgtt caggttgcga ggcagttgat 180 ggcgataacg tagcgaatca aacggttggc ttcgtctatt ggacacatcg cttcgagacg 240 tgattgcctg ggcttcttaa gtggtttatg acttagtctt ctgcaatgct ggacttggca 300 gaacgcgact tgaaggcggt tcgattgtat gctttctgat gccgggaagg acgaagagct 360 tgttgaggag aatagcgttg ctataattgc tgggtttgtc cataagcgcg taagcgcgtg 420 gttgaatggc gagagaggtt gcggtactct gaatgcagga tagagtggca ttttaagcaa 480 ggagggaaat ggtcaacttc gatatcgaaa ttggcaggga caaatctaaa gataatatat 540 atactcagaa agagagatga ggcttaccag gcgaaataac tgccatggat tagttgccga 600 aacaacttct aggcagtgaa aagtagttgc gttaatgtta gccaaagctt caggagtcag 660 gactatetaa acatgtaata ggggtetete cagcatgata gagggtetae agageaagat gatttgtatg tgcaacgcaa cacatgccta aaaccagaga gccagtatat atgatcgaaa 780 ggattgattg ttttccccca tgcaactcaa atataccaaa ataacaatgc ccaacaatat 840 ctattgtagc ctgtgaaaaa caacatgatt agcgcgaccc aaggcatact gaagctcaca 900 taccgctcga tgagatgaag accagaccct gattcgacaa tgtcactgac ttgacccggt tgcaatgcga acgctgcctc ctcgaactct ttctgcattt caccacggcc aaagaagccg 1020 cttcggagtg ttagcaaaca ttacgggaag gatacattgg ggagtatcat tacagatcgc 1080

cettetteet ageactactg cagteegact eggacatege aagateteeg ageaggttet 1140 cccctcacat gattcgctca tgatgtccgc gcaaaatctc gcgcgcctcc tcttttgttc 1200 gagtaatcac ggcctccctc cagctgctcg gtcgcctgct gtctctgtgc ttgactagaa 1260 ggtgactgca acggatettg cettettgae teggggette atggtaagta geggegeege 1320 tgtgatatgt tgccatgtac atcttaagag tctccatatc ggtatccgct ggaggttccc 1380 atcgtgactc tctggtagcg gggttgaagt agtagggaag gtttttggag ttcgaatggc 1440 gaacttccca ccctgctgga agaccggtgt ttaccttttg acgaaatatc aggatatgtg 1500 acggaattac accactttga ttaaagtgag ataacacaga cataccattt tgcttcttaa 1560 gctttgaagg atacttgagg tgtgaaatgg tataaaactt agcgaggtat agaaccagtg 1620 ttgtcgcagc gacgcaaata gttcagagat gacgcgggga aaagcgagga ggggaaactt 1680 caaacatgac aaacaccgca aaccacgcaa acgtggtcca gattgatgtt cggcctctcc 1740 gtgcttcttc cagcaactct actcagaatc aactacatct tcaagttata cccttgatcc 1800 ttcctgacag ttcttgacct tgtgggcttt tctccgcttt agtttttcat cgatttccga 1860 gateteceaa agacataete gtegeatate gegeeteaaa acaceaeett eeeegetete 1920 tacgattcga cggtcctaga aatgtcagct agtccatctc cgtccgccga tggcgataac 1980 aaacagaccg aacaggtcca ttttcgcttc tgccgtgaat gctcaaatct gctctatccg 2040 aaagaagacc gcgtcaacaa ccgactgatg ttcacatgtc gaacctgcca tgttggcgag 2100 cccgcaacgt ccaattgcgt ttatcagaac aagctcacca gccaagtcgg cgacactgct 2160 ggtgtcactc aggatgtggg aaacgatcct acggtttgtc tatccggtct ctgtctgctt 2220 tgtggcgatg tgattgcttg ctctgcatgc gattcgacgt cctagctgct ggcctggtgc 2280 ctttggcttg caatatgctt ggaagaataa tgcggtccga atgtctggct aacgcgcaaa 2340 ttgtctttgc actttctttc tatagcttcc tcgatctaat aagacctgtc caaaatgcgc 2400 gcacaacgaa gctgtattct tccagtctca acaacgatca gcggaaaccg gaatggtgag 2460 catattgagt ttgtggaatg gatggtcctg gtggctaaca gtcttagaaa ctttattatg 2520 tttgctgcca ttgtggaaat gtcttcttat aaacttgtca ttcttgccca ttctatatca 2580 cgatacccat tatcgacttt acagcatgtt aggggtgttt ctttatggcg atcttatgtt 2640 atcagggaga ttccaggaaa agtatgctct attgatacaa gatagatatg tgaacgccta 2700

ataaaacaat tegeetaaat ggtatattat acgtgeattg gegeeaatga gaggatette 2760 gaccactgee tteecegaag ttetgtegee acaacgeetg tatteaagtt agaaactgeg 2820 gettagaett teeateeage tataactgae egtteattet ggtteegatg gggteteegg 2880 atttgtteae cagcacgeaa gegttateat caaacttgae aagggtteeg teeggeettt 2940 geattteett etteaceegg accaegacag egtgtegaat gteteetegg egaactttgt 3000 tg

<210> 3265 <211> 1962 <212> DNA <213> Aspergillus nidulans

<400> 3265

tccactgcgt tcctagccag gggttaacgg tgacgtctct cgccatgccg ttactttccg aacaaaacct aacggtctta acaagccatg gaaatatacc acgcactaca tccatctacc aatgteggte getggegeat taeegeette gaacetgttt tettgeegae gatgggette ggcggagatg tcaaatcccc aaactgcgcg gatgctaaag agtgttgtat tcggggagtt tctaaaacaa gatgacttaa ctgattagag tggctcttaa ttactggaag aacggcatac 300 acaaggttaa gcgtcgtctt ccgcagctac acccgtcctt ctcacaaaag ctagcggcac 360 cacacctccc agtgccaatg tgatcaaggt tgagctttga cgcaaagctt tctctacccg 420 tttccttgca tcatcttcgg tctcctgtcc cactctaccc agcgtcactc gatatcggtg 480 gaagatgaca gcgagtgtag caataaactc tacctgggca aacttcctcc ccatgcatgc 540 cctcaagccg tcgctgaatg gaatgaatgc gcctcggaca ggcttgtgag cgttttgcga 600 660 ctccagccct ggcccagaaa gccctctagc gctggcgttt cttgcaagaa aactaccagc gttgcgtttg tcccaacgac gaggatcaaa actgtccgcg tctgggcccc agtatgcttc 720 tgagtagtgg agaacattgg cgttgagatt gactcgcaca tttgggggca agcaatgccg 780 ttcgccctta taggtaattt ccgccatgtg cgttgtcgtc attttgggaa tacttacaac 840 cggtgggtac aaacgaaggg tctcaagctg tgtctgttag cgagtgtgga atatattgag 900 ggagattttg gacttgccat aatacacagt ggagtcacca gtctcgggaa gaccgttgaa tactcccact cagccgggtt agcgggctga tcacgcaaag cctcttccaa ttccttatat 1020

aatctatctt gaacatcttg gtggatagca agtagaggca acgcaaatcg catggttgtc 1080 gctgttgtct catggcccgc aagcgagaat atgtaagtgt tacctagaat ctctgcattg 1140 gagagaccag gcccagagcc agagcaccgt acactttgtt cctctcttcg tgcggcaaca 1200 agcetteeca geaggttatg ceteteatgt teagaatttt eggtgacete aateaacgea 1260 tgcaaatatt tctttaggtc ctcatgtgcc gcaaaatcgg ttttgaagaa gggcactaac 1320 atgcgcggaa tccacttcgg caggattcca tttgcgatga agacagacat catagatcga 1380 ttcatatact ccataacgcc acggaacgtg aaatggtacc ctgacgcggg ggtggctgca 1440 tetetgaata agteeteege getateettg tegegeteag etgtggetga tgtegetggt 1500 ctatagggga gcctaacccc gaaaccggca ctgcatatga tattcagcga aagcttgagg 1560 atgtcctctc gtacatctgg aactgtgaac ctatcgcttc cattagaagc gttgaatttc 1620 ttttcccagt acgctagcat ctcctgcgcc tggatggcac tctcctgcca gacgagaccg 1680 ttgttcttgt cactgaatgc ggatgcggaa taccgatgat gataagccca ttcgcttcct 1740 tcagactacc tcggcgaata agcaatcagt ttctgatatg gtcgccagaa agggcagcga 1800 gactcacagt caacacgtta cgtccataca tctcgaacgc ctctgtccgg gtcatgttag 1860 caattagcac gaagcatcta cttacgctcc catctcgagc tcacagcaag taggaacaaa 1920 gcggtctgag tagtacgtac ccagatgctt aacaggcttg ac 1962

<210> 3266 <211> 2097 <212> DNA

<213> Aspergillus nidulans

<400> 3266

gtaaaaatgg gccatgcaaa cgaattatct gcagcgggtg acgcatcgag tgattaaaaa 60 ggatcgaata agcaacccca aagcataatg gtccccaaag aagctttcag ataatatcag 120 caagatattt tacggaagcc ggtatgaact gacttacaac tgtgattgtc tccatgcata 180 gcactaaggt gtcagacgtc aagtagcgcg aatcggagag cgcgtactcc ttccacaatt 240 gaccaaagaa gtcctgagct gatcccatac gaccatgatt gatcataaag tagccttcaa 300 ataggcagtg aagagtgccc gctgcgtgt ttcaacggtt agggcgacat cgacaacagg 360 ggttcggtat actcgtacag agggcaaacc ataaaatggc aaaccggtcc gccttcctca 420

gattgggccg cacccatata ctcagcagta atactgctcc taatagtact gcgcagctta cgcctgcagt acatattaag ccaagcacag aagtttcatt gggcgtgtag tcgatgattc 540 gcgcatcgat gggatagtag gggtgggaaa taggatcatc catattttgt tgtgccctgg 600 tattctgtga gctagctggt atttccaaaa gcaatgttaa gtgaagattt gggaagaaga 660 agccagactt cttactttct tgctggacat aatccctgga caggatgatc atcaaaataa 720 cccgccaaaa caggaatggt gctgataatg atttagacta accatataca gttagtaaca tatcctcagg cataattcag gcagaaacag ctccaaggtg tccaaccgcc aacgtctccg 840 cageceegta tteetgetgt egtegteagt tggteteate atetteaatg etgeeaettt agtgatecta ecctgteegg gaggteteae gaggeettaa taetettgag caattgegta acggtgcgat gggccgtcct tcagtgcaaa gaaagtcctt ggggcttgat gtaccccgca 1020 ctacagctgc tgaagcgcta cctgggatcg cggcgctctt tgtgatccat ttcgatgtca 1080 aagctgggta aatcctacta tgctgctttg ttttcttcaa tacagacctc gcttattctg 1140 ggtgcttcat taggtacact gtgacctgga aacgcactat acccgggggt aagtgacaca 1200 cctacgagat ggatgctatg ccctactgaa taccggaaca gtcgaggtcg aaggggccgt 1260 cgagtacaag tctctgccat ccggattaca caatgtctcg gaagatttgg tgtatgtaca 1320 aaagcctaag acacccatgt ctcgcatcgc taaccgcatt cttggttagc tatttcgttc 1380 acgatcagta tgctggcatc agcgcgttcg tcaatcagcc tgcggacgaa tcggagcgca 1440 acgcgaagat gttctcgatt ggagttctgg tgccgttgag ctgtggaagg ctgggcaaga 1500 gctggcgaca tgcctcaaaa ttgaaggaat tagctcagtg agtagcagca cccgattccg 1560 ggcttttctt caactagacc taatatatgg ggccgctttc aaggcgctat tccgagagtg 1620 ctttcagcac aaatagcttg tctgaatact gggaaaccca tgagctatcc gcaaacgaga 1680 categgeage acetgattea ceaettgact cacetetgag teteogaatg egageteata 1740 gtgacaggcc agatactctg caaagaaatc gagctatcag tgacgcaatg gtgctggaga 1800 cgtctaggcc ggccctgacg ccctttcacc cagcttcttc gctacctgat tttctcgatg 1860 cgttttggtcc cctcctattt ccgttatata gagcagcact cctacgcaga agagtccttt 1920 tcatggcaga agctcctgta caagtacctt gtaactacgg tatgtatgaa acctactcat 1980 tatacataga cttgctaaat gtattacagt gtacgattta aaattgttgg cttcattgcc 2040

60

<210> <211> <212> <213>	3267 969 DNA Aspergillus	s nidulans				
<400>	3267					
taaccctcac	taaagggatc	cttcgtcggc	caatggtcca	ctttttgcgt	agtccagctg	60
aggaaaggat	cattttcccg	gtcgctagta	gcaggcattt	cggcgggcgg	aaccgcaaac	120
cactggcaga	ataccgtcag	taatgacgac	tggttgttct	accccaggga	gacagccgtt	180
ctccagaacg	tccaaaaggg	cgactcgcag	ggtttccaga	cgcgtggttt	actgtgggac	240
gaaccaaatc	caggtcgcca	cttgctagat	ggcattacgc	tgtgggggag	gaccggccgg	300
gaaagacgct	agaaggaaaa	gaagattcga	tggactgacg	gtcgtcgtac	aggacaatac	360
agccggttag	tggtaacggg	gaaacgggat	ttggcacttg	gcggtggaga	gtcgaatatc	420
ctccacccat	gattatcaaa	taatgtcatc	gagccacgga	gcagccaggc	cccttttgcc	480
caggtgggtt	tcccgtgact	tccgcaggca	caaagcaacg	gtcgccgaat	tcaagcaaac	540
accaaacgat	ggcagttcac	gaaccccctc	tactctggct	gaatggccga	atggctgata	600
ttgactggta	ttgactgagt	ctatcagacc	ggcttgggag	gaggtcagag	ccaggctgtg	660
gcctctgggc	ctagaaaagt	ccgcgatttc	cgcccgtgaa	ggcatcacag	tgaaagaaga	720
tctgctggca	atggttctag	cactaaatct	taggttagct	agtcgttcga	tgccctctaa	780
ctcccgcagg	tgcagcatgg	ggagcggcca	gccaagctcc	atgtgatgtt	agttcagcag	840
tacacgtaga	tactctgtcc	gcggtatttg	ggtatcgaat	cataggtcaa	atcatgagtc	900
cagcggcatt	tcctagagtc	aaggaaagct	ttaaagtgct	cagcatccaa	ccgtcgacgg	960
ggattgctg						969
<210> <211> <212> <213>	3268 2111 DNA Aspergillus	s nidulans				
<223> <400>	unsure at a	all n locati	ons			

gtggaagcca ttctaaaagc gatgtcaatc cccacatagt acacggcaag gatgaggtca

tgagtcctaa aaaggcaaac tgttaaagaa tagtggccaa ggttacctca agcaatacaa tgtaatattt gtaattteeg taaggeacee ggetgtteea gtgtgetegt teeegtaege tcagcaaccc ttaggttcga gtccatgcta tcacagtact ctaatacaca tagctggccc 300 gcgaagctcc aagggaaaaa aagggtgctg ttatctagta ttgacactgg aaagttctcg aagtcacaat tgttgaaaga ccaccattct tcccgtaagg ttagagactt gtacaactta 360 aacatactat gatggcatga atcatatgac cacctgcctg tttggttctg ctcaccccct 480 cccgccgtcc cggtctcccg ctatttatct cttgttcgcc aaaagacttg tttgtttgca tatgcgattg actcgagcac cctttagaag caatagcaaa ttcaagacta gcggataact 540 cgatttaatt cgaaaagtgt gtactttgtt ctctccttgt cctcttggga gaacccattg gcgtcttcaa cttacctggg ttgagccttg atagttaacg tagatgcagt gacacgttca cacaaagtca atgaccgtga tcattccgcg gcacaggatg caatgactgc tcctaccgag 720 780 aatatccctc gttactttgc aaaatccggc cctatcgatg ctgaccctcg aaagaccaag aaggacgggg gaggtaaagg aaattggtag gtttctatgc tctcggcccc gtaaactctt acttatgatg atcactgacg cctcattagg ggccgctcag gagaagagat tcatgactat 900 gaatacagct tcatgaatan cccgcgtcat tcgaatagca gcatgcaagg catggcgggc tccaaaccta aatttgaaac agtgaagccc gagccagtct ttaaagaagc cttgcatgga 1020 cetteateeg aaaceaceat tgatgggget cetgtaacta agattgatag tgtcagtage 1080 ggcattagtg gcaatgacga ggccgagaaa gctgctaaca aaaattccgg ggtgaactga 1140 tgggctgtaa ctatgagcat caagcttgtg ctttcagaag gttacaagct tgatcgtacg 1200 acgatgtatt gatgatgggg aaatgcaaca gggcaaaaca catgtcgaag aaaaagcatg 1260 ccaagaaacg gcgggatctg aatgtatgtg attttttgaa gtggcatact gaacttgaat 1320 cacgaccccg tgtttgattt ctactgtata atgactttaa atggaagtcg gaagcaaaag 1380 gtaaacgatt agagtacttt aaagcagtag tcatgaatgc gttctagcta gagccagcta 1440 agccgctctt tccggttcgt ttgggacaat gagctctccg catccatact gcagggggtt 1500 tgaagagcgt catctgatgt cctttctttt tctgcggagg agagcagact cttgaaccaa 1560 cattcaagtt cgctcttttc aatatatcgt agaagagttg aattttctcg ttcaaggtcg 1620 cgaataattc gggctcgttg ctctggacga aatcgtgatg agataagggc agaatcactg 1680

tcattcaaaa gcacatcttg tggacgagtg gggcggtaaa gtggaggttt gctggggtcc 1740 gtacgatcta tgcaagttag taagataagt atctaagaat ttccggtact taccattcag 1800 gcacagtgca agggttcgag acagcgcagt ggcggtcaat ggggattcag tttcgcttcc 1860 catctgttaa ctgtccaacc gtagctccac ttgccctgat atgcattttg caacaagttt 1920 ggagtgcagc ttgaattgga ctcctgacat tggtcagcga tgaccgtacg taatgtactg 1980 tccccgaagc gttgtcaaat tgatcctgct gacgtagcgt aactcacatg gaaaactaat 2040 ttcattcccc caaaagtctt gaatagaaaa agggtttgag gtttaaaaaa aaaaagaata 2100 attttttaa a

<210> 3269 <211> 885 <212> DNA

<213> Aspergillus nidulans

<400> 3269

ggaaaacact gatgcagtgc tgcgcttcgg aagcaagaag cctgtataca tgatgagtgc cgacattatg tataccggat actttggagg cggcatcaaa gctcgagaag gcggcgccta tggcgcgaaa cagggccgtc atacacattg tcacggagat tgtggtgatc caataaatca 180 tgaaagcttc acctgtagcc ttgagaccag tcatccagta gactggcaga gcgaacagcg 240 tgacctgcgt gaggataagt ggtacatcgg cagcgatctg agcgaagcaa aaggcggcag 300 gatggttgag agcgaagcca cggtgctttg ctaaaacggg acgtgctgca aaggagttgg tcacctcgct catggagagc agcgaattca acaatatggc gaagaagaga gacccgcttt 420 tgaagggcag ccccgaagag tttttgggag cattgtagaa taaagaaccg gtaatgagag 480 cttggacgaa gttcaaaccc tgagggatga gaaatgtgac tttatcaccc cacagcagct gatactgtct gatcactgcc gatttgactt gcgtagagaa gctgacagtg agcggcgatc 600 teetggaaag ggeagggett titteggagt gaacggette tigaaagtit tiegtegeet \* 660 cggcagcctc tgctgagatt ggatagttgt attccaatgc cattttacgc ttcagttgcg ttgcttcata atacgagcga agttcttcgg cgtttcgagg atagcgactc tccatgtcgg 780 840 gtttaacccg tcgctcggta ggaacagtaa ccctggtcag gtaaaaggcg ctccttgctc 885 catcggagta aagaaagcaa aaatcctcca taaaaggctt tgctt

<210> 3270 <211> 1558 <212> DNA <213> Aspergillus nidulans

<400> 3270

ctaaatcgcg gccgcataat acgactcact atagggatca ccttattatc atccaagcgc 60 cgccccgcaa gaagaaatcg gccgcgtttg acggccaaag atagtccata gataacatca gtccctgcta ttgacgaggc tgataaggag acttggcctc gaagactatg ataaggtgat 180 cgacttaaaa gaaggtcata ctggcggatc ctgtccggag acactctttc tacattgcac tacttcccca agcttgctgg atcagaggct tgtcacttat tgcacacaac gatgcatgaa atcaaggatg tgaaagttga agcacaagat cagcccggta tcgaaaagaa caatgagtta gagtccggaa taatacaaga cattggagcg cagctctttg cggaaggtga tcaaatttcc 420 gccgaagagc tcgagcgtga aggtgtcgag gtgcgcatga ttcttgacag gcgcgttatg 480 cctattgtaa gttctgaacc tcagcacgga gaagatttga ctgccatgat tctatgtctc acttatcata tggcattcaa ttttagagtg cgctcggcat ccacagacca aggtcctacc 600 aggtaattac tgacatttgt gatttagaca agctctctat caattatgcg tctgcatatt 660 cgttaatcac cgatctaggc ttgcaagtcc aaaggtactc atgggtagct gcaatctact actteggtta cetegeettg ceetacetta aatettette tteagegget geegettgea aaatacatgg gagttteget tetggtetgg getgggttgg taatagegea egttggegea aagaactatg ccgggatgct gatattgaga tttattctgg gaatggcaga agcatgcgta 900 agcccttgca gtacgttaca tacctacttc ccaaaacaga caagatcttg ctaacgggag cagtgatgag ctttacatcc atgttctaca agcgatccga gcagccgcta cgcatggcca 1020 tetggetete tgeaaatggg acageaacaa tggttggage getaetegge tttggtetgg 1080 gccatgtgca caacacatct cttgaaagct ggaagcttat cttcctcgtc atcggcctcc 1140 tgaaccttgt cacaggggtg cttttcctct ggctcatccc cgactctccc agctgcgaca 1200 agttcctcac ccacagacag cgcatcgtcg cagttcagcg cgtctccgaa aacatgattg 1260 gcattaaaac gaagcagttc aagttcggcc aaaccctgga gctcgtatat gacatcaagg 1320 tgctctgcat cctaagcatg ggaatattct gcggcgtcat caatggtggc gtctacactt 1380

cgcttctttc tgatcagggc tacggttttt cggcattacg ctcccttcta cacttcccaa 1440 ggggcaatga gaccgcgcgt tccattgcgg ttggttccaa tgtcggacta cgtgattggg 1500 tgttatgttc ctcacccttg gggctccaga ttcgttacga tttttacgtg acttgggt 1558

- <210> 3271 <211> 2686
- <212> DNA
- <213> Aspergillus nidulans
- <400> 3271

tgtccagggg gttctgacga aattacatgt ttagcggtaa gttgctagcc tcttaatgac aaggcaattg gttaactcct acagctaata tcctcaataa tgctctgtat atgactgqtc ttaacggagg aatcetteea aacgaceata atggategag tgettettae eacetttega attagttggc tgctaatggt cagacaacta ccttttcgaa ttggatctct cctcgcaggt tgaccttgcg gacggagcga actataaact gcatctgatt cttccggcgt cccacaactc aaagatcaag cactctgggc gaatcaagcc aacgataccc ttttcagcta cggcggacgt ggtgtaagcg atacccctcg gattacgcgg tctgaatgta caatatttcg aaggtttatg 420 ggaaagcagc aggggagcgt caagccggtg cggctggcat atggcggtat gtttcaatcc 480 taccgcatat ggtctattag gactaatccg cacagcatac accgacgccc ccgagattca 540 ggcggcatac tggattggcg gaaacaagga cagtaaaaca acaatttcaa taacctacag 600 caccaaaaag tatgtttctg atatgatcca attcaataca accaccgagg aatatgtcgt 660 gctcgatgcc cctttcacgc ccgtagagcg cgctctggtt taccttccag tcaataggat 720 gggagcactg cttttcttcg gcggtgaggt accgtctgtt caggagggta tcgatgcaga 780 acttacatct gtgcgtttgc tgtcgtcgtt tacatgctca actaccagtc agaatgcatg 840 ggaccacgtt catatctatg acattgaata ccaaaaatgg tttaagcaga caacatacgg cactgaaacc tecegtacte aatettgege ttetgttgte cacgateeeg aggeeagete gtggcagatc ttcgtcgtca gcggagagac tttgagtcca aagatattgt gaccgatgtg 1020 tatgeeteae ceaettttet eeetetgeea eacteaeeta gteggatage tegtaeetgt 1080 ccgtcccctc cttcagatga ttccgcgccg gagttctaat caaaggccga atqtcacacq 1140 cctgccgcac atatggacgt cagattttcg gcattgggag cgtcaggcct gggttgataa 1200

ctcttttgct ggatgctatg gcaggccagg ttctatctac gatgcgcaat ccaaagttgt 1260 ccgcaatgaa ttcgacgtat gcccacccac ccataactca gcaggcttgt agtaactagc 1320 tttgttagcc cgcgatatca acccactcga ttccctacgt cacggcagct gagatagaga 1380 aatcccgtcc ctttagaatg ggccgatggc tcgctttatt cctgtttctc gcatccagca 1440 cgatggcccg gccgacttat tcttcgagca gaagctcaat gaacaaagcc gccattgcag 1500 gtggagttgt aggcagtgtt gcgtgggctg ctatgatttc cgcacttttt ggctattgat 1560 acgcagacga ggtagtatgc gcaagggcca cgaggctggt ataaaggcag aaatggagcc 1620 aaaggeteaa eegttgggta aaeteggeae agaegatgtg tttggegagt tggagtaaag 1680 gaatcatcat cgaaatgggg teettgaaga tgecagattt etgeatgaac tggattegae 1740 ctcgcctggg gatttatatg atcatgggat gacgaagtcg agatctacct taacgatcgc 1800 ataaaaatag ggcatatttt ccgtatctat agaagacctc taccaattaa ccgcaccata 1860 tcccatgaga aaagcaggat taataatgca cgagtaaagt atttcgacag cttccccaca 1920 atcttgagga gcactggcgc tggtcgatct ccatgtgggg ttccccagga ctgcataaac 1980 tegtacacag aggacattet etgtacacea eetgeteate eeaegtaate tgtgtatega 2040 catggcatta ttattctcat atgtggggct gaccaggctc gggggggtaca tagcacaaac 2100 ctcgataaat atcaagcccc atgtcagagt gctgtactct gtgctcttta cattatactt 2220 aagagtegaa caattacaga ettgattteg attetgatee cagettacee egtetaaata 2280 tecagaaega eeetaaataa caaccaagat geaccecace teaacceeet eeaacettte 2340 ccttcccccc atgaaagacc tgacaaccga aaacatcacg gaaaatgtac atatcgtgaa 2400 ctcgcaatgc cgcgatcctc gccttcgtta ccttctcaac cgcatagtca gccacctaca 2460 tgacttctgc ctcgaaacgc gcctctccac agaagaatgg aacacaggca tccaatttct 2520 gactgagatc ggtcagatta gcgacgacct ccgacacgag atgattcttc tctcagatac 2580 actaggtgtc tcatcacttg tggacagtat caaccaccca cggcaaccgc ctgccacaga 2640 ggggacggtg ctgggcccgt tccatacgca tgacgcagcg gatatg 2686

<210> 3272 <211> 699

<212> <213>	DNA Aspergillu	s nidulans				
<400>	3272					
ctattgtttt	atgtctgtcc	agggaccagg	aagctctgtg	ttgcagagtc	tggccttctt	60
gaccttctgc	aacttggccg	agtatagaaa	agcccagttg	ctgcgtagta	agtactattc	120
tgatttcaaa	taatgcaact	gtatctatag	gtcgctttgt	catgagcctc	cataatagct	180
taaagcttca	ataagccagc	tacagcagag	aggcgcgcta	atcaatctca	ctctaatact	240
ctgttaaggg	aaggagctaa	tgctcagccg	tcagccctga	tggtcaatgc	caagatttca	300
tctgactatt	acagcataag	tttagtcgga	tagattctac	ctagcagaaa	tatgtttgct	360
ctggatacct	atacctgatc	cgctttgtaa	atctatgtgt	gactgtgtct	cgatcgccat	420
actgactccg	ggcaggttct	ttctacaagt	ctctcactag	agtagactac	ttctgcctgg	480
cgcaatgtga	gtctttttt	ctgaacagaa	gcttgccaga	ataactgccc	ttctgtacta	540
cctgatctac	ggggtaatcc	tgcttgacca	tggagtcagc	gagctaaggt	actacagatc	600
ctgggtcgta	cccgacctcc	aaagtcatgt	gatatatgtg	aaggaggtgg	tcactggccg	660
gacgcgcttt	gacataacac	gtgcgacagg	tgcagagat			699
<210> <211> <212> <213>	3273 878 DNA Aspergillus	s nidulans				
<211> <212>	878 DNA	s nidulans				
<211> <212> <213> <400>	878 DNA Aspergillus 3273	s nidulans atgtacctct	catttgcgaa	gaatctaaat	ctgagacaac	60
<211> <212> <213> <400> gtcgcaatta	878 DNA Aspergillus 3273 gataccatac					60
<211> <212> <213> <400> gtcgcaatta agccactcgc	878 DNA Aspergillus 3273 gataccatac aggtccccac	atgtacctct	aggeceeteg	tgttacagaa	tcgagtccta	
<211> <212> <213> <400> gtcgcaatta agccactcgc caggtatctt	878 DNA Aspergillus 3273 gataccatac aggtcccac accgatggcg	atgtacetet tetgactgae	aggcccctcg caagaccccg	tgttacagaa gacccccggc	tcgagtccta cgggccgaag	120
<211> <212> <213> <400> gtcgcaatta agccactcgc caggtatctt ctcccatcga	878 DNA Aspergillus 3273 gataccatac aggtcccac accgatggcg ccctcctct	atgtacctct tctgactgac gctactgcaa	aggcccctcg caagaccccg aaaatggtca	tgttacagaa gacccccggc ctcccagacc	tcgagtccta cgggccgaag aaggattctt	120 180
<211> <212> <213> <400> gtcgcaatta agccactcgc caggtatctt ctcccatcga cgcgcagaac	878 DNA Aspergillus 3273 gataccatac aggtcccac accgatggcg ccctcctcct ttcgtcgtcc	atgtacctct tctgactgac gctactgcaa gtcccttcgg	aggcccctcg caagaccccg aaaatggtca tgcgccgttc	tgttacagaa gacccccggc ctcccagacc caagtcgact	tcgagtccta cgggccgaag aaggattctt gaaccaatcg	120 180 240
<211> <212> <213> <400> gtcgcaatta agccactcgc caggtatctt ctcccatcga cgcgcagaac ggagcaagcc	878 DNA Aspergillus 3273 gataccatac aggtcccac accgatggcg ccctcctct ttcgtcgtcc ccgtggcaaa	atgtacctct tctgactgac gctactgcaa gtcccttcgg ctaggcttcc	aggcccctcg caagaccccg aaaatggtca tgcgccgttc aggcccagat	tgttacagaa gacccccggc ctcccagacc caagtcgact ggaagaggag	tcgagtccta cgggccgaag aaggattctt gaaccaatcg cttcggcgtc	120 180 240 300
<211> <212> <213> <400> gtcgcaatta agccactcgc caggtatctt ctcccatcga cgcgcagaac ggagcaagcc acggtgaggc	878 DNA Aspergillus 3273 gataccatac aggtcccac accgatggcg ccctcctct ttcgtcgtcc ccgtggcaaa gcggccgaaa	atgtacctct tctgactgac gctactgcaa gtcccttcgg ctaggcttcc aagatgtcca	aggcccctcg caagaccccg aaaatggtca tgcgccgttc aggcccagat gtctgcctga	tgttacagaa gacccccggc ctcccagacc caagtcgact ggaagaggag cttctcgcct	tcgagtccta cgggccgaag aaggattctt gaaccaatcg cttcggcgtc cctccagtca	120 180 240 300 360

gcgaccccta	cgctcgaacc	gagagcatga	cccatcgcgg	ccgttacagc	tatgcaagca	600
gctatgtcag	caccgttaac	aatccgcgca	gactgcgccg	ccgcaaggac	cctactccgt	660
acaagtgagt	agagtgtgca	tcatggaagc	cgacgagacc	gtgctaacac	tagatacagt	720
atcctcgtca	tcggtgcgcg	aaactcaggc	aagacttcct	tgcttaactt	tctcgcaagt	780
cgctggctct	gcccccgcat	aaacatcctt	cgcgtgcgcc	cgacgaagtg	gaatatgata	840
gtcacaaccc	cgccagcgaa	aggtacactt	ctcactac		•	878
<210> <211> <212> <213>	3274 669 DNA Aspergillus	s nidulans				
	gcatagtgtg	tcagacttcg	Сааааасада	ggccaccttt	ctataacata	60
	agcttccgac					120
	atgtcagact					180
						240
-	cgtacaatcg					
gacaccgggc	ggaaagctga	ctccgcaggc	ggccgaggca	ctattggaaa	acaatccctc	300
cctgaagaac	gagctcggtg	ggttagataa	ggacaaggct	ttggaagcat	tgcgcaagat	360
ggatatatct	gaacttctga	ccgggctttc	tttgaccggg	aagaacaaga	aggatatggc	420
cgcgtttaag	ttctggcaga	cgcaacccgt	accgccgctt	cgacgaagcc	gccagcaatg	480
ctgccggtgg	gccgattaag	atgatcgacc	ctgagaaggt	atcgaaggag	ccggatgcgt	540
tgattgaggg	cttcgagtgg	accaccctgg	acttgacgaa	cgaggaggaa	cttcgggagc	600
tctgggacct	actcacatac	cactatgttg	aggacgataa	tgctatgttţ	cggttcagat	660
actccaagt		·				669
<210> <211> <212> <213>	3275 758 DNA Aspergillus unsure at a		ons			
<400>	3275					

ctattgcgac ctaagaaagt aaactacagg gcttactaga tcttcccctt gtctccttcc 60 atggggatag ttgggctttc attttcgaga ctgccaagtt accacgtact agcgcaatgt catcctgttt agagaattta actcttttcc ctccatggaa ctttggtcta tggcaaaaga 180 gctcacaggg acctggacct accaaggcct ccctgataga agttacaggg cttgctcca 240 gcctacctag tgtgctttct acatcacgaa agagagacca tatactaaac cccacaatga 300 aacgagagag atatgtgaag gcaaaagaga gtatttataa tgcatacttc gtctttgagc ataggattta taaaaaagga tcaatagagg ccatatttca aaaacggaaa actacatqaa 420 gcaaataaga tattagaggg gaattgctct aatatatggt taaattatga ggtcaatttc ggtattagtc ctcgatacaa cacttctcgc aaccatagta ttaagcccca gggccagata 540 aagtaaacaa ggtcaggaat tgatattaag gcgctgtatt tctgccactc tatgacgaga 600 . ttacatagaa cgcaattgga gtgggaacag agacagcttc acacatgagc attctgaaaa 660 ccaagagcct ccatcctaac tnccatatat tatgaagcga acattcatca acttcgagaa 720 gtactataga acccctaatt tttcctgcgt ttgatgca 758 <210> 3276 <211> 814 <212> DNA <213> Aspergillus nidulans <400> 3276 ttaaaccgga gagagattgc gccatgttaa catcgtctct aagaataagg tagataaaag 60 tatageetee agacaaegaa categeacae egaagaettt ttgttetgta teaateeegg 120 agcccagacg aagcettcag gttgacettg eggatttget eggeggegte taaaceegee 180 gaggttcgcc ggcgccgccc atgttgtgcg atagagtatg acagcaagac gagaatccqa gacagaattg agagagaacg acagctcacg ccagcgatgg actaaggcgg atggtgcacq 300 gttttcatac gaaacggcag gcatgattcc ggctattctt gagacacttt ttcacactag 360 aagcetgett tegeatgaat teeeggegte aegteeggee aeteggetgt tgaecaagae

ataggccatg ccataattcg tccgtgatcg gcatcgcctg tcagcaagcg tgcgggtggt

tggcccccgc gcccactagt tttggttgcc ggctgaatcc ccgggtaaat taacctgggg

tgggaaaact ccacatggag aaatccagat tcagtgggga gacgaacgtg gccagtagca

480

540

600

cggagcgagt	gtataggatt	gggtgagtac	gctacagttg	cgtacaatat	tggtaggtcg	660
gtagttcatt	caggcgagtc	gttgtgtttg	ttaacgcgag	catcaattgc	tgggctcaca	720
cagtgtccgt	ggaaagtcca	tgggaaagca	cggagcatca	catgtgccta	gccattctgg	780
tggtcaactg	ggtcgttata	ctctctgagc	catc			814
<210> <211> <212> <213> <223> <400>	3277 671 DNA Aspergillus unsure at a	s nidulans all n locat:	ions			
gctcagacca	tcatatgatc	gtaaatcttt	caattctctc	gaaatctgtt	cagcgcatcg	60
acacatctca	gcctcatgcc	ataacgaaag	cttgcagcgc	aactttggga	tactgagttt	120
gggcagaaag	ggagggaagg	agttgtccaa	cgtcttcttc	caccatgtcc	accggtaaac	180
cgtccatcat	gacctctctg	ctctcttgtc	cgtaatatga	ccgaccgcgt	cgcgggcttc	240
gactccggct	gcgactgtaa	cttcggcttc	ggctgcgtga	gcgataacct	tcgcgatcgc	300
gatcgcggta	gccgtgccgt	ggccgtcgcg	gaggtgacct	tgaggatcgt	cgtcggaact	360
cattcgcggt	ctcgacttcg	gtatcgagat	cgagagccgg	aatggcctcg	ggagtagtcg	420
cgtcttctgt	cggctgcggg	gcctcgagga	ggagtgtgag	atggacctat	gagcaggagg	480
aaatttagtt	cagtttttgt	cgcatcctga	aaactatacg	cagggagata	gtgtaccgtc	540
aggtgaacga	gaacgggatt	gagagttgtc	gtcatacatg	cngncatnca	ggtcgtncct	600
gcgagggacg	gncgaggagg	cggccangga	gatacctgta	tcttcaggtt	cagatgagac	660
atgtaaacaa	С					671
<210> <211> <212> <213>	3278 641 DNA Aspergillus	s nidulans		÷		
<400>	3278					
ttcggagcgg	ccgtcgatag	caacaatgta	tgggagattg	atgctgcgag	acttttcgat	60
ccgttggcga	acctcatcct	catgaataac	atggactccc	gggctaacaa	aggagttctg	120
cgtataccag	ttgtagatct	ccctgagttc	tggagtatcc	ttgttgacat	caacgggtcg	180

tagataggta	tccgcgactg	ggctgcgtgg	actacagage	ggttcacgcc	gtgcctcgcg	240
ccgaagttga	agctccatcc	tctttcggtg	ttctactgct	tcttctgact	ccctctcctg	300
aaggttgatg	ttatagcaat	aaacagcaac	agtttcgtgc	gcatgaggcc	atgatacttt	360
gtcatttggg	tctaaatggg	tctcatactt	acgcatgtca	aggatgaaca	tcgatttttc	420
gccatcagca	tgagcaaagc	cataaaagaa	tgcttgacga	aagttgtcca	cagcacattc	480
gcgtttgata	gtactctcca	gccaattctg	aaatctcgcg	cgatatgcaa	cctcgtcaga	540
attgctgtgt	gcaaggccgc	gggggcaata	tttcccagta	aaacaatggc	agggtcagtc	600
cagctatttt	taaggacccg	agttttttgg	gtgtttgttt	С .		641
<210> <211> <212> <213> <400>	3279 860 DNA Aspergillus	s nidulans	·			
	3279	<b>.</b>	<b>**</b> **********************************		<b>.</b>	60
		tacataagct				60
		gcctatccta				120
		attaaggtaa				180
caaatactta	tattacatat	aggattacat	tcaggagaca	tatcatgact	cagaaggcac	240
tatggttata	tgtgcttata	gggagcaaat	ccagctccta	gctcaactat	cctcatttga	300
agtagatatg	tcttataagc	gaattcggac	caaagacata	aacgaggtgc	tttttgcaac	360
attcttgcct	gaccagtgca	aaggtaagtt	ttttgcacgg	ttctggaatt	gtggctaact	420
gctttttcta	gttatcacct	tgctgcgtgt	ttttactagt	gatgactcta	cgcggggtta	480
ttacctcctt	tttaaacgag	tctttaccct	tgtccagaag	cttacccaga	caccagtact	540
ttttgatcct	atacatggtt	ctggaatata	tggtattatt	atggacatgg	atagcaaact	600
atatactggt	gagtaccctc	agtcggctca	cagggactta	ctaactactt	gttaaggtct	660
tggtcaatat	ctttctgaag	ttgaccccca	gcgccgagat	ataacatggc	agctagaacg	720
tataattgtt	ttctgccaag	tccactttca	gcgctcgatt	ctaaggctat	tggaacacga	780
agtcatggaa	cacctctttg	gggtctgatg	atgagcttgc	tggattgtaa	ctcttgagtg	840
agtatgacca	gctgtttgat				•	860

<210> 3280 1278 DNA <213> Aspergillus nidulans <400> 3280 ttttgtatac attatggtat gtcgtctcca tgaatgcgct ttgatgggct gctgactgac aacccagtgc ttggccatga atcggtcttt gactaacgtc ctgtttggtg gaattgctgc ccctcaacaa gcccagaaga agattgaggg caaggtcacc cagaccagcg tggaagagac 180

60

120

<210> <211> <212> <213>	3281 723 DNA Aspergillu	s nidulans				
<400>	3281					
taagattgcc	cggttggt <u>c</u> t	acgataggtc	gcatctctcg	attgccattg	tcaagcatcc	60
actggaagtc	gttgggtgag	tgttgcccgt	ggagctctgg	tgcgggcagg	atagctcctc	120
taaccctcag	actgaggtat	aacctaccgg	gcgtgcatca	gccgcaggtt	tgcggagata	180
gtcttttgcg	ccatttcttc	tgatcagcag	gttaagggat	atggtgcgca	tctgatgtcc	240
catctgaaag	taagcaagca	aattgaaagc	gtgctcacct	ctgcgagtat	cattacttac	300
tgaaagctct	ttaggactac	gtcaaggcca	cttcggacat	tatgcacttt	ctgacctatg	360
ccgataatta	tgcgatcggg	tatttcaaga	aacaaggatt	cacaaaagag	attcaactgg	420
accgatctat	atggatgggc	tacatcaaag	attatgaagg	aggaaccatc	atgcagtgca	480
caatgctccc	gaaaatccgg	tatctcgaat	ccgggcgcat	gttgctcaaa	cagaaagagg	540
cggtccacgc	aaagattcgt	gccttcagca	aatcgcatat	catccatccg	ccgccgaagg	600
agtggaagaa	cggacctgtc	aagattgacc	cgttgagcat	tcccgccatt	aaagagtccg	660
gctggtcgcc	ggatatggac	gaactcgttc	gtcagccacg	acacgggccg	aattgaagca	720
tct	•					723
<210> <211> <212> <213>	3282 1174 DNA Aspergillu	 s nidulans				
<400>	3282					
aacgttcgag	tccgtgattg	ctgacgtacg	aagaatacga	tgccatcaga	gtatcatttc	60
ggaagaccta	gaattcttac	tggcaagccg	aagcgaagcg	aaactttaaa	tgacatattc	120
tggagcgatc	attgcgtggg	aaaacccact	ctgtacgtgg	aaagttgaga	cttaaggata	180
ctcacgagtc	ggataccggc	gtcgattcgc	caaacggtgt	accgtgtgga	ggaaacacag	240
gaggcctcaa	ctcccagtgg	atcaagctgc	ctcaaaaata	tcccggtcag	ccactggcat	300
agatgctgga	ttaaggccca	tggctgaata	ctcaggcaga	gtataaatga	caatatcatt	360
cagaacggga	ataagcagct	aaaatttccg	gaatagagcg	gttgttattc	gctcaatgag	420

taacggtcac acagccgagc tgacagacgc tgccatgcgc cagtgacctc gtgcaaaaagt cgacgacaag gcaccagggg caaggttgca gcagctgcgg ccgtgatgaa gagacggccg aagtttettt gggegacage tteaateage atggaegage caeggaaaat geatggetaa 600 tgccgccttg aggcactagg tctggacttg atactgtttg tagtatagcg gtaggcgagt 660 ggagggctgg cggatggcct gacggagccg cggatccttg tcagctgcgg gtaaaggtac 720 agtagcaccc ccactgggct ggactatcgg ggtgacttac tcgaggaaca gtgtttagga 780 gaaggcaact cacggagcga tagcgaacgg tgttatttcg actatggcga gtcgaaattt 840 ccggcgttct gggtacggca ctccctgatc cttgctggga gactttgcaa cttctcgtgg cgtactgcgt actccgtact aacactccag gctcagggca acaagaggcg ggagactaaa atagategeg gatggtgaat egtggageaa ttgatggtga eeggegagee tgtgageete 1020 tcgacgtcga ccgaagaaag aaagagttct cgatgagagt gggaatggat taattaccta 1080 attaccagta agattcgata cgatacggta ccccgctgac cagcccatac gcccactttg 1140 gctcattttg atacaccata aagttctggt cacc 1174

<210> 3283 <211> 948

<211> 948 <212> DNA

<213> Aspergillus nidulans

<400> 3283

60 tactgggcac tagtacaata aatataagca ccaactagat acatagccag tgaagatgcg gaccacaatc gggaagattg ttgccagtgt atttctgtat tgcggaaagc cgtacgtatt 120 gattggtgag tacctgaagc ctgggatata tgtttgctta tcgtgtaagt catttggctt 180 240 ggggtacttt cagacgagtg ttgatgtgtg agtgctgatt aggtcattgg aagcttgggc 300 ggcggctggg agccaggtct catgccggtc tgattatact cgaagtctag aggtaggtag tcacatctat gattggatag atgaacttga cgttttgatg tttgatgtat ggggcaggac 360 420 ttttgacaga acaggcaatg gatgagatgg agatatggta tcctggacgt tgagaaatcg gtggacaggg gagcaatgtc caaaaacggc ttagcatcgc agtaaatgac aaaagccgcg 480 atgcacggat agtaatgaac gccaatgtca catagaatga aatactgggt acaatcatac 540 gtaaatctat cgtaactctt cataacttaa gtcaaatgaa acaaccatat ctgcaaaaaa

aaaaaaaaga taacgccacc tacttccagg cattcagccc ggcccaagga tcggaagaat 660 ttgcggaaac ggaaggtcca gtttgcggtg atgactgtga atgaccttg tggtgctggc 720 tgcttccgta tggtcggctc tgagcatacc cgcctggtcc cgaggggaac ggccctgttg 780 atggtgggta ggtgggctgc aggtgtcctc accgttggtt caggacatgt tcattaaatt 840 ccgggtgctt gttcctaacg accatgactt ctggcgcatt tttgtgtcct tgcttctgtt 900 gcacttgtcc gtgagctttt tggggctagg ccaccatctt tctaaggc 948

<210> 3284 <211> 1484 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3284

agctcccctg actgataata tatagtggtt tgaatacaag gactaagacc tcattctggg 60 ttataaaatg cacaaaggaa gggcagaatg actattggct atacaaatgt aacctattaa ggagtggatg cctcaatgat tggcactctc tgttctctat ggactatccg aatgatttga ccattetett gacceagete tggtgetggg aetteaagaa tageeacata aagtacatea acatcatčag ggatcatgaa tcatgtatcg tcatacgcat aaactaagtg ccagaccata 300 gctctaaaac atcaagctca gcaaccactg aatacgaaac taggcaccga cccgagtgct 360 ccgttatgct cctcgttcca ggcttcgagg tccaggtcgg gcataaagcg gtcctcgact 420 aggccgccat catcatcggc gttggttgca ccggcacgtg gattatctgg gttttcgaag 480 gacaaaagta catcgaaatc cggcgaaggg aattcctcac taggtgcctt ttctgagggt gtcctagtgg tttctgccgc ggacgtttct tgcgggggac agtttgacag agagttggg gactgggaga agcttggatt ataattgccc ggagaaagca tggagccgct ggaaggattg 660 cagegagaat atatagaget eecaagtgag tgegegggga etateaggtt tgggeeaegg 720 cctgacggca tttcccactt ctgtaacagc tggatcgtag tattctcaac caaggaaagc 780 cgtttctcaa tgcaatgaat gatgtgttta agaactcgca ctgctgcagt aatgggaaga 840 ggggaatcgt acagttgctg ggcgcagctg ctgggtgtag agacctgcac cgagcttgca 900 tcagcagtgg tcagggggtc tggcgagagc gcaattgagg aagctgggct tgggccggcc 960

<210> 3285 <211> 3263 <212> DNA

<213> Aspergillus nidulans

<400> 3285

ttactcacca tcgtctatta atgaggatgg gggggggtaa taactagggt attaacaaca 60 120 taatactaga tacttaccct tatgcgtaaa ggacctatgg ccacgtcggc tatgactatt 180 tcactttggg aacgtcgtaa tcgttaaaag cacaggacac cgaaatgagg cataacctca 240 tatcacagaa accaatatto tgggaccott atttacgagg ggtttacagg aaatgagcot 300 acaaacgcac agtatcccct ccctgtatgg ttccctccag tataaaatag gaaagcttcc 360 accetggggg ggggggecga geegtttaat ttatatgace etcatecaat teateagggg 420 gtttctggat tcaaaggcaa ttctgcgctg gagagtattc tggcggccaa aatcctaacg tggttaaggg gcaaaaaatg ctcctaacca atggagcccg ttatggtcaa cgagctggaa 540 acaagggagc atgtaaccga atgccatttt gaagtcagct acaaagctgg ataccgatct 600 ccggcaatgg gacgtcaccc tcctcctcga tgaaggcgcc gcatctgccc ttgacacgca 660 catgcagttc tacctgtgga aggggctcat ccagaaaaca acgctcggcg agcttggaaa 720 atccacgctt gaaactgtcc agcaatatgc agacataatg gcaggcaagc agcaagaccc 780 atacggccgt actgcgtttg ggaactggac actctctgat cctcagccgg agtcggtggc 840

atatgtgggc aaggtcacgc ccgttttgca cttcacgatg ggcggtgtcc tctttaacga 900 acagggccag gtgcttgacc agacctggac tcccatccgg ggcctctggg ctgcgggcga 960 ggtcacaggt ggtctgcatg ggcagaaccg gctgggtggt tcctcgctgc tagagtgtgc 1020 ggttttttggc cgcattgttg gggatcaggt agctgcgttt tataaccagc attatgtttc 1080 tgacagtggg cattgagtgg cgatagagtg cagctgcagt gtaatgatga attgatatga 1140 tcgaatctat atatcctaat gggttgatac gaatccaact gaatcccatt gcttttgcca 1200 gaacgtggaa aaaataatta gcagatgcca tagcacacat actcatcatt ataqttccat 1260 gtgcgaaaga gtgcactggg cctttacata catatgctct gttatacata atagcgctct 1320 ccagtcttct gaattaaatg ccagatgttt gacccaagaa gaggcagctc tgctagttga 1380 gttgtagcag tcattgagta gcaaagttta gctgcatcca ctctggcacc gaggctgcca 1440 tggagcctta tatggctgtc tatgcagata gatcggaaag cactcggaac cagcagcgga 1500 aaggageege gtggaggate eactgeegeg eeetetgaea ttgggaeeea eataeagatt 1560 tteettateg ataaatagag teggttttee ceaatgeeee teeaaceace acceegaett 1620 ttctggcaaa ttcttctcct actctagacg gccattgact atttccgtct tcttctcgat 1680 tggtcacttc gtactcaaca ggcctgtctg actctggaac gacaatcgct cccaacgagc 1740 gccaatccca ccttctgcca acccctcatc tcacattagc tctcggaatt ggttccgaga 1800 ttcagctcaa gatggacagc gaccagttca gagaggctgc gcacgctaca attgaagaca 1860 gtaagttact actaaacctc ctcagcttta gagctaactg atccagtaat ctcctacttc 1920 aacaacatcc ccaaccagcg cgtcctcccg acgatcgaac caggctacct acggccccag 1980 attccgccct ctcccccaac agaacccgaa tcctggccag caattcaggc ggatatcgac 2040 agtaagatca agcctggcct gacgcaatgg cagtcgccca acttcatggc gtttttcccg 2100 gccactgtaa cctaccette gateeteggt gagatgtaca gegeggeett caacgegeet 2160 gccttcaact ggctctgttc gcccgcctgc actgaacttg agaccgtcat gatggactgg 2220 atggcgcagg ctctggggct tcccaagtgc ttctatagta ctagtgagaa taagggtggc 2280 ggtgtcatcc agataagtgc gagtgatgcc gtcgcaccgg tgatgatcgc tgctcgtgaa 2340 agaagagttc agcagcaggc gaaggccgag gacctgaaag aggggaccga agagtatgag 2400 gaccggatta tggagctccg gccgcggttg gtggcgctta gtagctccca ggcgcacagc 2460

agtacggcga aggcggcgt gttggctggc acgcggtacc ggagtatcgg ggtcagtctg 2520 gagaatgata tggcccttac cggggctgag ctgcgatcta tgctggagga gctggacatc 2580 aagaacctgg cgccctattt tatcactctg tgctttgggt caacgaactc ttgcggttgg 2640 gatcgcttca aggagatcac ggacgtattg aaggagaaag agcactggtc gcgcatctgg 2700 gtgcacatcg atgcggccta tgctgggtct gccttggttg cagacgagtg gcagtacatt 2760 gcgagggatt tcgctgaggg cgtagatagc ttcaatctaa acatgcacaa gtggctgctc 2820 gttaactttg acgcaaggtt tgtcctacgt tttctataca tcgaggattt ggatattaac 2880 agtgccatga cagtctcctc tacgtccga accgccatga cctcaccgac ttcttggata 2940 tcaccccggc atacctgcgc aacccctact ctgaatcagg ccaggtcatc gactaccgca 3000 actggtctat cccgctggc cgacggttcc gcgcgctcaa gatctggtc gtgagatacct 3120 ttgcagatct catccgcagc cgcggtgatc tctttgagat tgtgaccaag ccggcatttg 3180 ggctgactgt gttccgtgtc aaggctgct cattggcgaa cgggaatgga gttctgtga 3240 acgggcagaa gtggactgtg gtg

<210> 3286 <211> 953 <212> DNA

<213> Aspergillus nidulans

<400> 3286

actgcgcaat teeteaaace caaagttgat getaggaage gagteggaca ttgagggege 60
tgatgcaaaa gecagaggag geeegatace ggttgtegaa agtgatggat caaatgagga 120
catgtttagt atetegaata tttgtagtac agtetggggt gegaggeeta ggaacaatta 180
cgagcaaaaa agtegeetta aaaaatgcaa aageggatat gacattgaca agaaggtget 240
tetgtgattg gtgttgegee acaaccagaa agettggegg teegtegaa acagatttag 300
gtgcagaaaa agteacagga teeagettga teaacaette ggegteeata tgactteate 360
ctagacatet geaccaagea gatgeagttg acagetgeee egegaagaeg teggtttgeg 420
geeegettat attteecaet getateaegg gatettgett aggagaettg teagteeteg 480
atatgettge tgggteggaa cetetggea gggeaagaet caaagataga eecaatggat 540

gaaaatgtgc	cgaagttact	gcactatggg	cacttaggaa	agcctgtcta	tcacccggaa	600
acccggtcgt	gggagttttt	gcggactctg	gttcgtcgta	agttacctag	gatactctca	660
tcagttacaa	tactaacaac	tcggaaagcg	ccgcgcatat	catttaccgg	ggtgaccaaa	720
accactgtac	aatctcctat	aatatcagtt	gaacaatctt	caacaataaa	acggtcgata	780
ttgtctcggg	gttatcctga	gcttgttgca	ggctacggcc	ttgctcacag	tgaaacagtt	840
tcgcatacca	tcacagcagc	aagcagagca	tgtaacgctt	tggagtccaa	gcttcttgac	900
tttggacgtg	cagtggattt	tgatattgac	tcgtcgggac	gccggaaggt	ccc	953
<210> <211> <212> <213>	3287 655 DNA Aspergillus	s nidulans				
ccccatatgt	acaccaaggt	acctggggcc	aatgaatgca	aatcqtcqqa	ageggeetta	60
	atcggattgc				•	120
	tctgctgaag					180
	ggaacttgct					240
•	gttgaatagt					300
	aagggagggc					360
	agagatgttt					420
	tcgtcagacc				_	480
	gtacctccga					540
tgcattttgg	acagaagtta	tagcttcttc	attcacaaac	tcatcttcat	caagaagctg	600
aatttgccag	tccttgtctc	ccctgtgggg	gattgagatc	agaacgagca	ggtcg	655
	3288 882 DNA Aspergillus	nidulans				

gtctgaatat gaaagtacat tagcttgcgc aaggttactg gatagaaaag ggtcatcgtg

ctttgcaaag ttggatgcta attctgaaga gtggcaagta gtgggctgtc cccttagaac 120 ctagcttcaa cgtaaacata aagacaaatg ggtggtcttt gcatcaataa tacatactta traggtric tigritarga tragcatata cratgaatag riggariati aatatraga 240 gagctacact accatggcta aacagaatgc gtcctgccca aattgcctgc gataaggaca 300 ttcaggggtt cctccaaaat gtagctccac ctttcatgct aaaaaaaaggc caatgtaccg 360 aagatcccgg gcgtccgttg gcaagctagt ccgcgagcag ccagtcacgt cggactttgc 420 agaggctaga ctttaccttg gcagggtgat ggtatcactg agacttgcca aatggttcgc 480 ggtgcaactc ctcatggagg aggaactgga catcttcaac cccctccct ctcttcattc 540 gtttcgttcg ttgttgatat ccgtttgcat tcgctttctt atcatctaat acagacgctt 600 gcatccgtat cttttgtaca acattaattc cagttccctt gtcccctcac tgtctctcct taagtgttac tttcatccta ctgcaatagt tctttcatta cactcgactg tatcctaatt 720 tcaacttggt tgtctgagct tatgcgaaat ataaactcgc ctggttcacg ttgatctttc 780 aatgettace agegttetgt gattetacea gateegggee ggateatgeg tetettacaa 84.0 tgtcttttc tgcagcctac ctttacaccg gcgtcaatgc ct 882 <210> 3289 <211> 765 <212> DNA <213> Aspergillus nidulans <400> 3289 atactetett cetegeetee atetteagag geaeggeace catgecatee actecategt 60 cttggtcagc agtggcactc cgtccctcga gatctaatgg ctgtcgacct tcatgtgttg 120 cattttcagt ggccacggat gccatggatg atctggtatc ttggtccagt acttggagtc 180 tctgttcgat gagctgcagt cgccgttcta gcactgcatt cggatgcggc ctatatgaat 240 aagatgagaa cgctatcgga ctagatgaat ggccatgtct agaaagacat tactcacaag 300 tctcccaatt gagaaccaat cacagaggta cgaggccgag tcgaaggctg gtcgtatcgg 360 cactoggtgt coatatooto goatgacgaa catggotgag tgocattaca ctatatttta cattacatct gaggtcaaaa ccgcaatttc ccgccaaaga gatqccattg tacttactcq

agactttegt gegegaeagg acegaeaege caeggagaee etetteegtt teeggeettg

gcgtcttgat gcgtgccgca tgtcggagtc accgggctgg gctccatgcg gctggtctgt 600 tggcgtagtg attgggacgt gcccagcagg ctcccgggcc ttttccgtta gctgtgcgag 660 cagettgete tgeetegete ttgtetgtge ggggtatgee aaaaaactag ggttatggag gctgttgccc accacggctg cggcagtggc cctttactgt tgagt 765 <210> 3290 <211> 1100 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 3290 agaaatgggg aaggtgaagg cagccatatc tgcactctgt cccagaagcc cgccaaqcqa 60 gaggggagcg ccgtactctc actaaaccac ataatgcggc ctgcgactgg aactactgtg ccttctcgag tggctactcc catgtcccct acgactgcca tggctatggc ttctcctcct 180 gactgtcgtc gtctccttga caacaactgg gcgatcattg ttacgcctat aaagccagag 240 cgcaatgatc gccgtccaga agaagaagag cacctccata atgccaatcg caaagcaggt cttcagcatc cgacacgtct tatttaggtc atctgctaga ttgttgccag actggcgccc 360 gaatgcgcca aaggggccca gggagaccca aacactgcnc gccgtcccaa ccnccgcagt 420 cggcgtcggc aaaaagcggg agttggtata caccggctat gaaggcgcca aagaagagaa 480 ggtcgacaaa ggaaacgaac gcggcggagc gttttgtggt tgaatgcgaa taagagtgtc 540 gatacaccag aagacgggca atcacagaga cgatgaagag gacgagaatg tatgnaggtg 600 tgatcatatt ggcttttagg tagccatcaa tgaaataggc ctgattgcga tgggacatgt 660 tagtatggat gtctggttag ttggctagaa ggggaggcgc accatcatcc caattatggg 720 gatgaggaaa actatctccg tcaagcggtt gaagatgaag aagatgcttc cgatcatgtt 780 ggcggttgac tgtttgttgc cttgccttgg attatagtac agggctggtg gtatttgagg 840 agcgctggac gggacaaggg tcaagcgtgg aaatgtgatc gcatcgcacg gatatgatag 900 atttcagtcc gaggagaata tgagaatgaa ggatcgtcgc aaatgcgaga cctcaatgca aggtacctag acacctcaag gcaggggaga aaggcgctgt agatcgatct gcggacaagt 1020 cgatgcgaca acttcgatta gaatcaccaa gccaacccag cacgcgcaga tgcacgagga 1080 gatattcagg accatgtctc 1100

<210> <211>	989					
<212>	DNA					
<213>	Aspergillus	nidulans				
<400>	3291					
ccaggtgatg	caaagtagac	agtaaccctg	tccgtggaac	tgtccgcgga	attaacttca	60
aagtcttcaa	ggaatctgat	agacagaggt	gcagtgattg	tagactttgt	gctgccggtg	120
ttgctccatg	gtcgtcttaa	ctactaccaa	gactacacca	ttttccttct	ttcatcacat	180
ctctatatct	gcttgtctcg	ttgttacagt	ctcatcttcg	aacgcttcat	atgagagccg	240
tccgatgcta	tgaaggctaa	cgacagacgt	taagaagcat	agcatccata	caagccatcc	30,0
cagtccgagt	ttctgccgct	atattgacga	gctatggacg	atttataggt	gccgcgttct	360
ttccggatac	cattctgacg	ctttcctcca	agttgtctcc	atctctaatt	tcggttccgt	420
gggcgtgcct	gacgcgggaa	acttgctacg	atcctcaaat	ggtctgactg	taatccacga	480
	gccgtcgctg					540
	aacgcagctc					600
	cggataatag					660
	ggacggctgt					720
	agcgaaaagt					780
	gtcgcatagc					840
	tagcaagttt					900
	aataccacac	-	cctaggaact	ccacatcacg	gcgccaaaat	960
tgcaacctgg	ggtgagcggt	ctgcccgga				989
<210>	3292				•	
<211>	4078					
<212>	DNA					
<213>	Aspergillus	nidulans				
<223> <400>	unsure at a 3292	.ll n locati	ons .			
cagettteag	cactaacgcc	acagttacat	ccagaccgtc	tcagactgtc	aggacgtttg	60

3291

<210>

acgcgctacg ggacggcagt gttcgatgtt agtcaggctt atcaaagaca accctcatat 120 tctactaata tcctcgcaat gccattggcc caccacttaa ctacaggccc tcaccagcca 180 caageteaca getgaaatet ggtttetage ceateggteg tttteettet eggacagagt 240 300 cggaagctgg gccagcttcc gaccccgcac cgtcaagacc agcgaggaaa gtttcccgat ttggggtcgc cggagaggaa ggctttgcac ggtccagagc atccttcggg cgttctagga 360 acatgtgtta aaacttgatg agaaaaaaac gtgaaggcga aggagaatct ttcgaggtcc cgtgattgta gtggtaattt tgagtgcttg ggattggtta ctgttcgggg aatttttttt tttttttttt caagtcgtgt gatttgggtg atttaattag tattgcctat agggagtgta 540 600 nnggtttttc tgtctagaat aatnaatacg tagactggta gcattcaagt tccattgatt gtagagttca atagcagggg gattatgctt ggagtttacc tgggcgggta cgtcatcgat 660 acttcaatgg agcgggatcg gggcctcgtg atactcccgg tcgccctcag cagtaaccga 720 ctgcaacgcg gggaaaagga tcttctttgt cggcgggagc agcccctagg ttcgtctcta 780 taaggagttc gcgaactgaa ttcgaaatcc tcccatgtga caaaccttga cagtattttc tttccggttt accagcttga aaggccaacc ccggatttat gacggcaagg tgtcgtgatg ccccgcgttc ggagaatcga gtcagatgga tgtcatacat acatagatac atctgttctt 960 gtgattcgaa tagcacgagt tatatatagt tcttatgttc gatatgattc tatacggctg 1020 atgttgccac attgaagtcc accaacatca ttgatcatga tcctagccag atcagataga 1080 tcactatatc aatgacctaa ccatgaacac caccattcgc tgaccgggac atctcgccgt 1140 ccctgtccca agagccaggt aactcgacac gcagcgctgg taccgaaacc gcgttcatag 1200 cgaggtcacc caagtccatg gccgtccatc tcatgtgtca gccagcgtgt agaataccga 1260 cagtccatgg ttaagagctc gagcagcgaa gagccatgcg agcaatttgc atccgccaac 1320 ctagatagac atgagattga gacaaaaagc caccactgtc gtcagccatg aaaaagttaa 1380 acgttaaggg ggtgcctttg tttggatcat ctatttggcc ttcataagag aaaatccggt 1440 tccttggtag gaggacgtac tgggaggcaa gtatcaagaa gtcaaaatca tgagagataa 1500 tgcacgtaaa ggtctaggga tcagtgcaac tgttctagat ctcgtcgatc ctcgttatgt 1560 tgaaggtttc tgcgcattgg cctggctctt acgtgtccat gcgccaggat cgctgtccag 1620 actgagette cageceggea atgatgegag ggtttageet actatagaga catgeaggta 1680

gcaagaagaa acaaggaaca aatgtggtat ctttttacac gaacaaagac acagtccaga 1800 ggtgcagtac ccgcgctaag atgatgacca tagcccccag cccttttatc aataataaag 1860 gaaggaaatc ccatgtgacc atatcaaccg tgtacccctg tatctgtatc atgtcgaata 1920 tcatctgtac aaaaagatta ttcagtagta gcggaccgaa gcccagtgcg cggaaacaga 1980 cagccaccat gcaaagagta aaatgcaaaa tcaagaataa gcgacccgaa aataacagcc 2040 atataatccc taggtgcgcc caaaatgcaa tgcagtcgtg attggtacgt gtcacaagga 2100 tgataagcag catgtctgcg aaagtaaaca gaaggaagat tggtcaaaat cgggtatcat 2160 aatcaaaagg ggagaagaga agaaggcgtc tgttggacgt aatcagtcta ccaccccttt 2220 gcgtggtatt cccaaggccc aaaatcagtg tagtggttga aggaccccgt ctttgcgacg 2280 tetttateag etaceceatt ggagetegge ategeeacet getggttttg aggteetgga 2340 tactccttca ggttcttcat gtcgtgagtg gtatgcctcc gcttgaatgc gtttgcggtc 2400 gcgctctttt gctgccgctc ccacaagagg tggcgccgaa gggattcggt caactcagta 2460 gcaagcatgt tccggcgggt agtacgcggg gaatgcgcca cagattgagg agtaggcttc 2520 atgatgateg geetggateg gggaacaeeg ggteeettea ttgteaggtt eteetegteg 2580 tcatcagggg gcgacgcagg aatggaaggg ccgttgggtg aggtaaggcg tgatcgctgc 2640 aaagccggag tagaccgaga ggcatctccc attctaaggg gctggtgcat catcatggtc 2700 aaaagtgagc ggcgtgagac caggttcggt cgcgaatcca cccgctggaa catatctctc 2760 tcatcaacgc tagaacgacc gctttcagtg attgaatcct cccagtccga gtcttcgtca 2820 tetteaatag caetetegga gatateatea teggtetega tggegteete gtegttgeea 2880 ctttgtcgct ccttcattga cttgagattt cccacttgct ccttgaatgt tgccacctta 2940 tttttaggat tgaggttact gcccggccgc ttttcaagct ggtctgatag cgagctgcgg 3000 tgaggagcct gcatcatgcg atcttcaaaa gaactctcgt cctcatcccc ggaggaacca 3060 ccaagcgtaa acatgttgcc ctttttcttt agaggcgaga gtttggccgg aacttgagtt 3120 ttagaagcgt ccggatcact cgagagtcga ggctgcgacc ggtaggatga agatatctga 3180 gaaggagaga aaccacggac aatgctgggc gacttgatca actgaggctt cgagggaaga 3240 atgcctgaag atgaaacact agtgtccgag ccattaacat tcacgttagc agcatcgctg 3300

teattacegt etggggcagt egttgageae gacteagteg agtgettetg tegetegttt 3360
agagegaaag teggeegett gagegttgtg tttgaaggag gggtaggagt eggegtagat 3420
gteeggggeg tgatgtegae aaceggttgg gteagggttg eeacegggga gattggetee 3480
aaagttttet teteettgat gtteageae ataegeteea agteeaaega tgtgaaatge 3540
tteteetttg etegeeetaa getaaatgaa teeteeegaa eaaeggeagg ettgtagtee 3600
tetetgggee gettgatatg ettttetate egtteegeet ggteagaage ageegattee 3660
aeggetggetg acaattetgg taagteggeg getteegaae gaageaaggg eaagaeegag 3720
gtgtegetgg aactttetgg ttetacaeag aaagtetege gagteeaeaa eeteeaaetg 3780
aggtteteta gtegaeggee etetteeatg aagtetgee atttggaaaa taetgeaeag 3840
gteagtatag tetettgega aagttegtae eaaettaeee ateeaeatee catggagget 3900
etgtgtgttt getgateea eettgtgaat etttgetgg teeaeegtea agaegggtgt 3960
egaaagegtta tgtgeeaagt gateagatat gggtaegggg tegeegtete eeeegage 4078

<210> 3293 <211> 1073

<211> 1073 <212> DNA

<213> Aspergillus nidulans

<400> 3293

teccaageea aagaceagee tggteteete ggaaceactg agaacgaget ttteattaga 60 aagtggattg aggagcaggg tcacgggctt gggaccacct ccgacaagga cggcgagaac 120 tctactttcg ataaggagct tgttgacgcc gaagttatca tcaccactcc gtgagttgtt 180 tectetattg cetegecagt geteateeg ttaacettea teaceacage ttecaceceg 240 gatacctcac agctgagcgt ctggccaagg ctaataacct caagcttgct gtcactgccg 300 gtattggctc cgaccatgtc gacttggacg ctgccaacaa gacaaacggt ggtattactg 360 ttgctgaggt cactggttcc aacgttgtct ccgtcgctga gcacgttgtc atgaccattc 420 tectectegt acgeaattte gtteeegeee acgaceagat eegtaacggt gaetggaatg 480 tegeegettg tgetaataae gagttetaee ttgagaaeaa ggttgtegga aeegetggtg. 540 ttggccgtat cggtgagcgt gtgctccgcc gtctcaagcc ctgggactgc aaggagctcc 600 tetattatga etateagece etgegeeetg aggitigaaaa ggagattigge getegeegeg 660 tggactetet egaggagatg gteteteagt gtgatgitigt taccattaat tgeeettige 720 acgagaagac eegiggitete ticaacaagg ageteatite taagatgaag eetggitaaat 780 etgetetiti atatitigati atteegatge taatgitatea eaaaggitea tggetegitea 840 acactgeteg tggegetati gitigitaagg aggatgitige tgaggetete aagiteeggee 900 aceteeggg etaeegggit gatgitetigi teeeceagee egeteecaag gageaeeeae 960 teegatacge egageaeeet tggggeggig gtaaegetae tgitieeeeae atgitatggta 1020 catecattga egeceaaate egitaeegea aeggeaeeeg ggeeggiett aca 1073

<210> 3294

<211> 1620

<212> DNA

<213> Aspergillus nidulans

<400> 3294

taggatactt cgtggaaacg acccgaacca acttctcgtg cttcgctgtc cgactgtgtt 60 ctccatcttg ttttccactt ctgtcgagga aagtctccgg aggaagaaga aaaaaacgtc atccataaaa gattctctca catgtcgtct cagcaccgcg atccccacga atgttccccc 180 accatectet etaggaggeg egeteetgga ettttgaagt etectaatga ttgeetgatt 240 gtcataccct agccattatg gggagaatca agaaggttgc ggcacaaaag catgaggcta 300 cactggtaag ttctacctcc aaccacatcc ttgttggcct ttttttttgc agaaaggttg 360 acctaagaaa tetteatagt etecetaeet ageggaattt gtagetegtg egaceaetat 420 tteettgeeg gagetgeett eteacetteg cacattteee egegtttgge cattteeeag 480 aggtgacctg tatcactgga tcaatgtcct gaatcqcttt qacqagatcc ttqcctccqt 540 cattgataga tacggtctca gtaatggtcc ccaaacgacg ccctttagcc gacaatatct 600 cgtacattgt tgtacaagtg aagacccaag ctagattcgc gggatatcga ggctaaactt 660 gcgggtttgg ggtacggttc ggagggagat agggagcttc tggaagcctt actcgacttc 720 tctagactgc tgctggagaa atgtggcaac cgcagcttgt acaatagcag tgaacgcttg 780 ggcgagttac tcaacactac gtcgctgagc ttactacagt ctacgcttcg tttgtccctc 840 tetttageae aaagatatea eteaegteae eggggtgget egeatettea acagagettg 900

ttggcaacgc attacaacat tgacctcgag aagctgcaaa aaatcgcggc tcccttctcc 960
cggcctactc tcactagtcg accagggatt tctccatctg gtatcaagaa taaaagaaaaa 1020
gtccctcaga ctaaacataa tgccaatgac ctaacgtcgc tcacacgaga ggaccatggc 1080
tgggatgatt ggggctatgt ccacctccta tactaccctt cgggatcccg ctgagcaagg 1140
caaagcagtt actgaaagtg ggccaggcgg ctcccttgca cacgttccaa cgacttccac 1200
gcccttgcgc cgaagccata ccacgggctc tacttccggt gtaggccgga ttccttcgac 1260
gaggactccc cgcctcagtt tcaatacacc cgctggaaag tggaccgaaa ttacccggcg 1320
aaagacgctg atatcccagc tcgtagttct acatcgtcgc tgagagatct ctcgtgcact 1380
agcgaatgcc tgtggttaag gttgaacatt gacagattcg acgcaaaggc tgcccattta 1440
gtacaagaga cgaactcgca tagatttgga taccaattgc gttataccaa gcgcttcac 1500
aagattcata tgatggcca aagctactgc taaacgggt gtcactggtg gcatacacgc 1560
gtgaaatttt cagttggtta aaaaaggggt ggatgtggtt ttgtaaaaat aatattttt 1620

<210> 3295

<211> 1251

<212> DNA

<213> Aspergillus nidulans

<400> 3295

cgtgtggtga caagaagtcg ccaattcgac gaggtggtgg tgttgcttcg gtccccatcc 60 gcgagacttc tccactgagc ttcccaggaa gatctacgac caggcctggc gtattgcact 120 cagctaccga tacaggcgag gtcagctcat cattattgac aacgagattg gcattccgga 180 agacgctacg ccatattita tcaaggagat ctttaagttt aaccgctggg ggcgggagtt 240 tgggcgatcg actctgatta cagacagagt gcacgaggag ctgttcgaaa ctgtgcgttc 300 ggtaggagag gacgcaaaaa tcctcgaccg tggagatgtt gacgtgaagg atttgctgga 360 gaccggccga tttgatcgtg gagaagaggg cattggatcc gggggtcaat ttagcactcg 420 ctggagttga acaacaaacc caccaaggct acatatagat cgtattacgt tgagccatct 480 tgctactgat attaccagtc acttgatctg gatgtacaaa tagttctttt ccttactgca 540 tgaatgagtt gttttttctg tttcaaagca catgctctgg ctatcccgtt tcagacaaag 600 tctatctcca ttcccatctg acctatgttt tattcatact aaattatcct tcacacaata 660

aactaagtgg tttgctttgt tccaacttta atctctagtt ttgatccact tatagtcatt 780 ctaccttcac tccagtcttt tattttgtcc aatcttatcc ctattttgct ctaccctggg 840 gtcttttta aactcttacc taatcaccaa catttagggt ttggtacctc ttattccttg 900 gtgttctatt cccctatacc ttttttata attttatctt ctatcggatc aatcctcaat 960 ccttgtcttt ctaggtttta tttatcccta ttaaccacttg ttctctatat aaatattcaa 1020 ccctatacct ctgcgtctc tttcccatat tggattctcc cagcgagtcc ctaccttcct 1080 cctctattct ctaatttgag aaatcaggat cccttatcct cctattttc tacactcact 1140 cgttgactgc ctttgtatta ttttatcttc tatggctatc tcttttccca atatttaaaa 1200 tttctatttt taagccaact ctgactcact ttatcccaa tggattctttg t

<210> 3296 <211> 1353 <212> DNA

<213> Aspergillus nidulans

<400> 3296

gcgccgcgtg agggtggcaa gccttaccac tttcttaagg atgactccag ctccacccgc gagaccgttg ctgctcgcct caaggccgtt gcagaggagg ccggttccac ctctqqcqqt 120 tecaceacet actactgeae egacaceetg ggttactgtg ageagaatgt cettqeetae 180 accetgeett cacaggaeet tattgecaae tgtgatatet actaeteega acteeetget 240 cttgcagaca cctgctatga ccaggatcag gcaactacca ctcttcacga gttcactcac 300 gctccgggcg tctactcccc cggtactgat gatctgggct atgggtatga tgctgcgaca 360 gccttggata ctgacgatgc gcttaacaat gctgactcgt atgcgctcta tgctaacggt 420 atgttgtgac tcctattata gccctttagt ctcatgatgc taatattctc atagctgttt 480 accttggatg ctagattagc atatcactgg cgtcagccga atgctttgct ggactgaggg 540 aattgctgac ctgaggtgaa gaactgacga tactgatgat cgaacgcgac gcgacttcat 600 gctatagctc gcaagttata. cgagagatgg tcattttctc ttcatatggt tgtacatagc 660 agctgcgaaa atagcatttg attccttgat tttgggaaaa ccgtatcagt atactaacac 720 tgacgcacct ccaccaatta gaccaatttt tttatattta tcttatacct tcgtgctgtc 780

actigation controlled aggregates generally aggregates generally aggregates generally active generally aggregates attituded generally active generally active generally attituded aggregates and attituded generally aggregated aggregates and attituded generally aggregated generally attituded generally attituded generally aggregated attituded generally aggregated gen

<210> 3297 <211> 2938 <212> DNA

<213> Aspergillus nidulans

<400> 3297

gagttgtgtt acaatggtca cggaaggtgc gtgggaatgg tcgcttagct gttgctgttg 60 ctgtttgtgc tggtgatctg gaataaacga gtagttgcca tcatgcacca gctcgttctt 120 ctgaaattga ggtgtaagga acgactgctg caccggtgtg tgcactggtg taggcagagg ttttgtagga ggagcactgt tgtaagcagc gcgttggttc accggtgacc tccctgaggc attgggagtc tgctggtggc cgttgaattg ttgcgacatg cgcgggatgt tgtgcgagtt 300 ggatatttgc aggttgttct cccagccgtg gttgttggga atgaactgct gttgcgccaa cattggtgag ttgccaaaga cgaactgctg gttatattga ggaaggtacg attgctgctg cggagagttg gagtgctgga tatggatctc aggattgtag cagcaaacgg gggtcatcga 480 acgageettg aagetgeatg ageegteaaa caaggeagag taateggeag aagetgeegt 540 cgcggcggga aagtgcgaca ccgacgacgc tggcgacgag gtgggagacg agggcacgga 600 cgacggtggg gagacgacgt tcaggtgctg gtggtactgg aagggcgact gcagtcggcc 660 cagatettga etaaggtatt ggaaaggaag ateetgagtg tagtegggaa gaaattgate 720 gtcttggatg aaaacggagt cgggatagtt gaaggaggaa agtgtcgaag tttgatctga 780

tgtgatggca cctttacgta ctgatgggtg catgtacata atgtagtgga ggttgatttg ccactagggg tcgtggaggt gcgtagtaat aggtcggctc acaaggccac cgccaaaqaa caggagtttg tttccaagaa tctgagggat cgattctgtg gctcgggtgc tgagaaagga tggttctgga aaggtctggc agtgatgatg aaaccgctgg ccggggcaga ggcagatgct 1020 ggttttaaat cgagtcgagg gaccagatgt ttgggtctag catagtgatt aggttagctt 1080 caaatgatgc tggactttgt cacggtgatg agcaggtctc cgtatggccg atatggcagc 1140 agtggggatc gggtgtcata gttgaataat gagtcactaa cctatagtgt ggtttgcgtg 1200 tcaagtgatg tttgaactgt gatgattttg tgtctgaatt gggagtctgt tcagtctggg 1260 gggaacattg ggagacaggc ataatatagc ccgcgaatgg atgatatcac tgaccattag 1320 tgactttagt gaagctcatg gggtgctgtg agaggagccc cccgttacgc tagtggtatt 1380 attggtaacg tactagecce gegetagage etatteaata atcegtttat tittaateet 1440 tttttaattc taattgattt tctatttttt acagcgaaga tcttgagtgt caactccaat 1500 gcatgaagat cettetteag gttaetgaet tetteecaae eettgteteg eegattggge 1560 tgccctttga caccttggcc cagccacatc aaagttttcc tcgatttttt ctcccgttct 1620 cegteetete egtetetegt accetetegt acacagegta tegagtaega attaagtaeg 1680 aatccgcacg ctcttatcgc,cggtggccga gttctcccta taaggcagat cggccacata 1740 cccggctgac agggaattac taagatggct ccacaaccct taagtgcctg aactcggaac 1800 tcatagtctc gcacagacga ggcccggcag cagattgggc agttaatcgc gtctgtcgtc 1860 agttetegta gtatgetgag taaaegaata aggtggatge agtagggete agecaeegat 1920 ctcatcccat acctggagat ggagacgggg aaagcgacca accgaggccc ggagatctct 1980 cgacgtgagg atgacaaatg agagccagag tcagacaagg ccttgcagat tgcatctgcg 2040 tggcttgaat tccaaccgaa aaactgtgaa agcgggtcgg atgaattcca cagaagatca 2100 ttgttgactt ctccacaacc gtcaatagcg gcctcgtcat tggctggagc ggtgctgggc 2160 attetgatet gettgttega etegacaaat geatgaaetg egecacataa taatetgatt 2220 ggttggatcg gatacggcac gctttctacc cactttggtg tggcttgtgc aatcggactt 2280 caccggcgtg aggatcgaac agccggggac tttgcctgtc agatcgtgaa gcagatccat 2340 ttagegette gacageettg ttgaacgace actgaceaeg ttttetgett accagetgea 2400

tgcactgcgc accagggacc gatcggactc ctcgggattg agacgaaatc ccttgttgtt 2460 acataacttt attttgccg ttggcttcgg tgttctccta gatcttgcag ctctaaagat 2520 atactttcca ccacaactgg taaccttgac ggcatcaaag ttccgaaccg acatggtctg 2580 gaaagctgac actcgaggct cagtcctgac aacgtggtct ctcgtgattg cgatgagttc 2640 gaggctcagc cagacaaggt cagctgatac cagtatctcc agccgtcgaa ccccagactg 2700 gcgaaaaaga caggctactg ccttgtcttg acttgtacca ctgctgagca catgaccaca 2760 atagccgtaa caacatgatc acgcttcaga cggcctcgca tatcctgatt ttcagcaatg 2820 ggccggtctg actgttcac tggtaattac tggtaggttc cagctacttg cgactgcta 2880 tcaatttatc atgtggttca tgtggttcga gacatgtttg actcggtcgc tgccaatg 2938

<210> 3298 <211> 1521

<212> DNA <213> Aspergillus nidulans

<400> 3298

gggggggagt ttttatctct tttttggggg gtgttttaaa acaccacagg tttatatttt 60 aggggggggg taaaagtacg tttttatttt tggagagagc caaaaagagg taaaaaaaa 120 180 aatttcaagg gggcgtgggt acgggtaagt tcagtatttt cttttattag aattcggata aatatgcagg ggcaaagttg aagggcaatg ccatcatgat ttcccgtggt tatatttttt 300 attaggaatg tettigtaac cettateate ettetggagt tietteaage egatgitigt 360 tagtettatg aggtgttttg tgecaagegg atggteagtg aaaageagee tttegtgtga tatccgctct tacatttgca tatggattga gtctagtcca ctttcagcat tttgatagct attittcagc attigcaggg tcaccagagt tgcaaccaga tccatagagc citggaggat 540 gagcatgece atgeecegag gtactacage getettetat atectaaace actgaaattg 600 tgtatccact tctggactga atccctagag ctattttgta gcaagggcga aaaaatattt 660 gtgagtgctt taagttccgc gatgatctgt tttgcttctg acttgacctt tcgaatgagg 720 ttcctgcgca atttgaacgt ttgagccata tcttttatct ttttcgcgtc gtccatggta 780 tctttgaaga acatataagt ttcagctaca atctctattt tttcgatcac tttcttgaga 840

ctctcttttg catgttggat ctcgtggtat gcacgttca ggcgcttcgc atagcggtag 900
agatcttttg cgatcgggta tgcgagtcct gtcgcagaaa tagggtcat catgtgtcgt 960
cacgcataag tgttccaaaa agaagatgga ctaagggccg gcagaagatg agatggatag 1020
aaagtctgcg cgaaggtcaa gtaaaagtag ctctcaagta gccagcettc agctgggggg 1080
cgtgaacacc cagaacgaga ataggctatg agaaagtttg gctatggtga cgagcccagc 1140
ctcatattaa agcaccagca gggccgcaag aacaggtttc tcccaggcgg cgcctcgtgc 1200
cgtaccagtc tccaattgag aatccaggtc ttcgtggttg gatttaggta ggctgaagag 1260
ctacagcagc ctgtctatgt ggccaatcct acaactccgc cgctggtgcg cagagacaaa 1320
taatgtaccc tattgagatg taataaaagt aagttgagta cggggtggcc ttgcatgata 1380
tcaccccact tcaaacaagg ccaaaaaaag aagctaggat gatgtgggtg gagaggacag 1440
agaaaagaat gaaatgcaca gaaggaaaaa cacaaaagag tggaaaccaa tctcagcctg 1500
ccacgagggg agccaaatgt c

<210> 3299 <211> 1273

<212> DNA

<213> Aspergillus nidulans

<400> 3299

tgtccctgcg attagcgggg agccgagggt cgagattgca gctctatcgg aggctgatat 60 actcagtcac gcaggactgc ctcagaaagg aagactccga tgtacctggc tggatatgga 120 gccctggctg catttgagag ggcaaggctc agggagtaca ctcagggcag atgcttgaat 180 cattgatgca ccataacatt aagaattacc ccgtgatttt agaatataaa ctttagattc 240 aaaaactcgg agactatgca tgtcttgata aagctcttct agttagcgcg cgcaaaqaag 300 ctatattaca ttatatctat accgggacca acatgctttg tccggacatg tacttgggct 360 gctcgatacc catggcagcg tggacagccg tcgcaacgtc tacaatgaca ccaggctgct 420 tattgagget ccageceteg ggggegtagg ccatgatgaa gggaactetg gtggtggtgt 480 gcgatgtett atgagtgeee ttetetggaa geateaeete agegtgtgta acattgggaa 540 tgctagcctg attctatact agtatcttga ttggattgca aaacttaccc gtgatcagca 600 gtaatgaaaa gggtgtaacc gtgcttcttg caggcctcgt aaatgatacc aatggccttg 660

teggtageag caacacett gatageagee tegtagacae cagtgtggee aaceatgtea 720 gggggageaa agttgtteat gacgaacteg aacttgeeet eggeaatgeg etectecaee 780 teettgeeta egecetetge geteateteg ggeteaaggt eggaggtage aacettttggt 840 gagggaatea tgteegggae etecaeeggg aactgettt caatacegee gttgaagaag 900 aaagtgaegt gggegtaett eteeggtteeg geaaegtgae aetgetggae gteettett 960 eegageeatt eageeaagae gttgeeeata tgttgtgggg ggaaggegae agggaaggteg 1020 taateggtet tgtactgggt eatagtagaa atgtggatat teetggggag gggaaggteg 1080 ggettgggga geggtegtag teegeaggag etgggtgat teegeaacae ggteagagtg 1140 tagttgaaaa aaagaggttg teegtateetg eaceggegte ettgeeaaa gatgatgget 1200 aaggaacegt eggetegtet egtgtaeeget tttaatgett aagggttega etteetgeet 1260 eteggaagat get

<210> 3300 <211> 3038

<212> DNA

<213> Aspergillus nidulans

<400> 3300

60 gtccacggga tctgcaaccg gcatgtggcg tacactgcga cataatctca gcccgtcgtc gaactaatct caaggcatcg ctgaaatgga tatagccacc ggccaccagt gcggaaaact 120 cgcataagct atgtccgagg gtcacatcca cccgactttt cgtatcgaag ccgaactccg 180 240 tttcaagtat ccggagtatt agcactgacg ttgccattat agccggctgt gaattttctg tcttgttgag ttctgagttt ggcccgtctg cgattacatg agatagccgg aaacctaata 300 ttgaatccat ctcttccaaa aaattccccg cgacactggg gaacctatca atccaaggac 360 gggtcattcc taccetetge acceeatgge ctaaccetag gtgagetgea atteatgtet 420 tcgcgaagca tggagtccaa cttaccaggg aaaaaaaggg cagttcgtaa aggctgatga 480 ttattgtaat gagatataca tettetttga taetttetgt teggttttge gtttateete 540 ttagagtgac gactaaccaa ccctgtacct tcgtaagtat atgtgaatca atttttccat 600 actactcacc ccaattgaga tgtgtgaaca ttgctgcagg tttataggat cgggcattga 660 cagcagacgt aaagctcagt aatagaaaca cagccacgaa aatgaagagt aagcatcatg 720

atcctgcaat tcttgaaata gcatgcctgc gctggtgggc aatatccaaa ggaatgtgca 780 caggicagag teatggagtt ggtgtgtget tacagacacg gteatgtgat atateaaatg 840 cgggggttga ctccgcattc gctcaaatgc ttcgagtctt taggcatata ataccataca 900 ttagttctat tttaatgata gegetttgat ttteeegeta tggggeggae gaggggatga 960 aattcaatca gagttctggc ggaagctggt ttagggaatc gtagtggtag gataaacctc 1020 ctttgatgat aaggggtctg cactettcat gacttteett gtatteagee ttttaattte 1080 agcttattct ttactttcat tctcagagct tactcggcat tgttgtcagt gcacttattt 1140 caagcaagaa caagctcgct tccaagccaa tgaaggggat acatatagaa ggtttatcat 1200 aacgaacttg gctaatatcc ccagcaataa gcgaaatagc catctggaat cctttgaatt 1260 tgtgcgagtt cctgtactca agtgcgtgtg gtgtcagaag cagacactca ccgccaggca 1320 ttcctcaagg ttattactgg tccatcggaa cgcagataac ttagtgattg accgccttca 1380 ctggagctcg ataacattat ttccgcaaca gaaacgcgca atagcacttg agcactagag 1440 ccgaatgctt tgccgtagga actttcactt ttccgacgca cgcattctta cagtctactt 1500 tgaatgcgtc tgacatctgt cttccatatt gacgatgttc gtgccgaaag cagggtccgc 1560 aaccaccetg eggaateege gaaggegtea gegtaegagt tetggegagt ceateaagge 1620 accaagtgct aaaaggcaac gatcaattct aagccaagat gataatcctg atacaggaat 1680 cccaacatat ggtgcgccaa atcacagatc ctcgatacct actgcgacca ctgaggttga 1740 ctcgacgccc gcgcctggcg gcgagaacca aaaaaacatt ccgataagga ccttcaacgc 1800 gacagagaag cgaaaaagcg atgttttagg ccctatcata ctggttggtt cctttctgct 1860 gtatagtttt ctgcgtatgt taactctcgt tcagtcaaaa acagatttct atacagtatc 1920 tcaattgcca tgtttacctg accaaatccg aaacctccgt tcaggtacgt ctagtccgaa 1980 atatatccat tagccattaa ctcatagaat tagaaaattg cagatgttct ttcgccgccg 2040 gccatgggta tgggcttatt atcactcaac tcgaggccat catttggccg tattccacca 2100 tggtctcatc gcccttacct accgatgtat ataggcttcc catacctgag gcctataggg 2160 atgccagcga tgtatcacct ttgggggtga ttttatcgac cgcgaccagt tctacccccg 2220 gattaatgat actaatgccg cataatggaa ggatcatata ctgggagacc gtgtcttgcg 2280 ccgcatcatt aagtcttcca cggcaaaagc aaacagggct tcagggatat gtcccaggga 2340

tgctttcagg tgaatgtgcg actgatatag tgaacgcgga gccttcaggt gttatagtca 2400 cattttctac tgggcgagtt gctcatatta ccctcagaga ttctcaagga aagccggccg 2460 tgaccgtaaa cttcttgaag aatccacaca gcactggcgg aattggattt cttgacggca 2520 tcaagaatgt tttcggggcc ggatattgga gaaaaaaagt tgccgctgtg cgtgcaggtg 2580 aatcctttca gcggggtcag cgagatatca taattgcaac ttcagcaggt ctggtggaag 2640 tctgggatac ccactggaat aatggtagta ttctcaaaaa ccaatatgat gtcaaagaag 2700 acctactage tgcaaccagg aaggatgaag cctctgacta tgaagtcaaa atctgggatc 2760 ttgcagttg caccagttca tgtgaggaca gcgcgaatcc atgggagata tcggtactgg 2820 ttggcctgtt ctcggggta actatacaag gcgtgtttgt gactcgattg cggctcactg 2880 acggggctcg cgttttgtca acaaatccta tcagttgca cacttttccc accgattca 2940 ttcatctaga gcctcggctc ttcatccca aacctcatga gacggcattc attgtgattg 3000 gacaatcta aatcttgctg tcattaacgg acgctgaa

<210> 3301 <211> 1270

<212> DNA

<213> Aspergillus nidulans

<400> 3301

atttatatac agaaaagcaa agccatacat atatccgatt acggtcctag taccttcccc 60 tttttaattt cggtcggata ccgtgcgccg gctacatcaa aagttgagtc aagggttgtt tatttgcagt ggcccttgtc ggcgttgacg tcttgctata tgggagttag tcatctttga 180 tcagtctttt gggtgtggag atacatacga tgcaaacacc agactcgcag acgcccatct 240 ttccatcctt agtgcaagga gcaccggccg ggagctggga tgcgttacat gccaacgacc 300 aagatatgtc gggctcggag atcctccggc ttcccggttt aacttacagt ctttccaqcg 360 gccatggcag tgccaatgag agcgagggtg gcgagccagg agaagttcat tttgaagtgt 420 agagttgtgt taagaaggta ataggtggaa gttgttggtt caatgctttc gcaggtaggc 480 tgttgttgaa atcaaagtca ccagctagcc caaagggcgc cgtctttata cctcttctcg 540 actecetgae aegeaagate agegteteet ttteateeae aagtteegte etggteegee 600 cagttacgca agactccaat agtccttcca ggcgcggtga tgatcttccc tccttgaccg 660 attgagattg agetetatgt tggagactec agtttgacat ggteatecag gggattgteg 780 tgttggatet gceaaaaggt attgateaga tececaettt ceaecttate cgaaectecag 840 cegtaggaaa ttagageete tgetgaaege tttgaattga geggattgge cageeteget 900 geacactgea geectacaaa gtgageaagt aegggaage tttgeagetg cagggetgga 960 aggeecegga ceaegagtet gegaeteege agteaggae gggeaeteeg geeceatagt 1020 eeecaeggtg ategeeettg geaaaaaece etggaeetgt eeggaetete gattatgaat 1080 gggttttgee atteacetg teetgagetg aaagteeage aggeettea tgtaaaetae etgeageea 1200 agteegetge gaaaggtte attaaeta geeateeata tgtaaaetae etgeateega 1260 aacegtteat

<210> 3302 <211> 1106

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3302

ggtatcacaa cagatctcga ccataccgct aagggaagtt atatcttttc agaagaagag gagcaggagt teettgaget tagcegaege eeegaeetat aegaagetet tgegagaage attgcccct caatatacgg aaacctggac atcaagaagg ctatcgtatg tctgctcatq ggagggtcaa agaagattet teeegaegge atgaagette gtggagatat caaegttett 240 ctccttggtg accctggtac tgccaaatct caactgctga agttcacgga aaaagtttca 300 ccaatcgcca tctacacctc cggtaagggt tcgtccgctg ctggtcttac ggcatccgtq 360 caacgggacc cggccacacg tgaattctat ctggagggag gtgccatggt tcttgcagac 420 ggtggtgttg tctgcatcga tgagttcgac aagatgcgag atgaagaccg agtagccatt 480 cacgaagcca tggaacagca gacgatctcc atcgccaaag ccggtatcac caccatcctc aactctagga catctgtctt agctgcagcc aaccccatct tcggccgata cgacgacctc 600 aagactcccg gtgaaaatat cgacttccaa accaccattc tctcccgttt cgatatgatt 660 ttcgtcgtcc gcgacgatca tgaacgcagc cgggatgaga acatcgcccg tcacgtcatg

ggagtgcaca tgggtggccg aggcatggag gagcaggtcg aggcagagat tcccctagag 780

aaaatgaaac gatacattag ctactgtcgc agccgctgcg caccenegtc tttcacccga 840

agcggcagaa aaactctcgt ctcatttcgt ttcgatccga aagcaggtcc accgcgccga 900

gctcgacgcc aacgcccgct cctctatccc cataactgtt cgtcaactgg aagccattgt 960

ccgtatcacc gagtcgctgg ccaagctaag tctgcagcct atagcaactg aagcccacgt 1020

tgatgaagct attcgcctct tcctcgcatc aacaatggac gccatacaca gggtgagggc 1080

cagggcacag agagatgatg gaggag 1106

<210> 3303 <211> 3763

<212> DNA

<213> Aspergillus nidulans

<400> 3303

ggtattaggg atctagatta tatagataaa gaactttatc tgactggacc aggagcttta 60 tacctaatct atcctagaag agtttagaat aactaaatca atatctcaag acacactgct tgatectagt accaatetgg ataattaatt atetaggaag etaeettgag acctgtataa 180 taagtttagg aagattatta aacagcttac ctacctagct ggcagaacta ggccagatat ctagttctct ataaactgac taagctaata tcttacagat ccctgagagg tccatcttag 300 agcttcaaga tatctccttt actatatcaa aggcactgtt atatatagaa taacctacag tgcaaagggg agtacagata ccaagaccct gataggatat tcagatttat tatataggaa 420 ttccacaaag cagagatcga ccagtatata tatctttatg ctagctaata gaccagttag 480 540 ttggtatagc cagaagcagc ctattactgc tatgtcaata actaaagcag aatatattat agctgcagag gcagcaaagc aggctatcta gatcagatac tttctagcag ctatatcaaa 600 gcatcctaag cagccaaccc aactgggaat taacaatcaa ggtactttga tgctatcatc 660 caacccagtt aatcatctac acagcaagca tatctgcata caatatcatg ccatctagga 720 cttcatcgag tatggagata tcaagccaat ctatatccct acctcagaaa tggtggcaga 780 tggtctaaca aaggcaataa aggctgataa ctttaagaaa gcacttcaat tgctgcagct 840 gaagtcaaaa taaggttcta taatataata tcaagatcct cagattaata agataaaggc 900 atteaacace cettlatigt tietgttita titecttitt tagaagetig tatagetica 960

ttctatttat ttcagggtat tgaatgaagg ggagtgatat agaaatataa ggccatgtaa 1020 tctctggtag attgaccaga cattgcctgt ttctagaagg ttcctaccct ctgtatatat 1080 atagtaggga gagaggaata cacacaagaa aagcaatgaa ggaatctatc atcaacaaga 1140 taggtgtcaa tcgtcacatg gcatccgatc cttagtaggc tacgttggtg tagttgatgc 1200 agtttcctcc tgccctttat cctctgagca tattccacaa cagttatcaa gtatttattc 1260 ttgacacgaa cgttgtgata aggaaatcca tctctgttgc ccataacaga aattcaaatc 1320 tgactacttg agacgaccac tggaagtcaa cttgcatttg acccaatata cgttctgttt 1380 ctggtgggga ctcgctgaga gagtctgcga tcgctctaca cctgccctaa aagtataccg 1440 taacgteeta egttgaattt accaateaea ttgagtteee gttttttett tgetetgtge 1500 gagcaagagc tggctggaaa ggccttccta aggacctacg catatttatt taaagggata 1560 attggtagtg gagtaaaagt ggccaaaatc cgcaaaaagg ctttccaagg aaaggaatgg 1620 tctggttagt atagtccacg tataagcgaa gtttacacaa cttttattag caagtatgga 1680 tctgactatg cgtacttaag acattacaca cccacccttt tcctcgccta ccctgggctt 1740 tgatttacca ctcgccagaa gtttccactc ttggtcacca tctatgtctt tgaacgaccc 1800 ttctcgaccc cagaggtcta caattcccct gaagtatgct gatctattat agtctttaac 1860 aggetecage teageacace getgecegtt etgeacttta teccaecett caageettat 1920 gccatgaata tgcggaatgt ttatatccat tagtggcata tatatacgcc cgcatacagt 1980 ctccttcgag atcgtggtca cctcaataaa cccagaattg tcactagagt ttctggattc 2040 aacattgtaa ccaaaactga cacatccagg ctcttcggag ccctttttgt agagaactct 2100 ttgcctgtaa tgcctggcaa aaacatcttg ctctaagcgg atgaacttct gtgttttttc 2160 ctgtggtttt tcctgtggtt tttcctgtgg aattatgata agctgatcgt tcttcgtatc 2220 atattccaga ccaggtaagt ttttcctaat ttcggaggtg aaatatatcc ccagcggcat 2280 aacteeteea tggaetaeee ttteaggeea tgteatetga tgatatettt gateeteeae 2340 tgttggtgtt aagaatagtt cccattgata tttcttcaat gtggatacga agaattgcct 2400 cttaatatcg cgcaaatcct gttccttttt ctctttatct ttatcagttg cctcagagta 2460 ccatggtaca aggttttggt ctgtcagatt cagggcacct atcaaagccc agcattcatc 2520 ttetttettt gtgaacette ggetetgtge eecageeaga agatagagea eegtetgtte 2580

gtggggccag taggctatga gccctgagtg tacaagccag gagagaaagc ggcccgcata 2640 cctatagttc tcggtgtagt tattatcccg gggtccggtg ctgatgaagt caacggcttt 2700 ctgcactatg tctggagtgc cttgtggcat tccgtacgaa gaggtccaac cctcactgtg 2760 ccggagaaaa gcactggtga tacagtcagc gagctgtggg ctgcaaccca caagtattcc 2820 actgtggcaa ttttctgagc tggtgagtcg atgggatggc atttgcggtc gcaatcaaac 2880 agaagcgact cttgcagtag aacaccctct tggagcgtcc agccacaggt gagccaaggt 2940 tcatcctgtt gggcatcttc taggcataag cggaactcaa agagcatgtc tgcaaggttc 3000 ttgcgcggcc tgaaatccgc tttaaggtac gttgataatt tagggcaatt tgcccaggtc 3060 gtgcgatgta gccagacaat gccctctttc gcgccttcaa aaatttgcct gtatatacaa 3120 ttactcaaat cgattcaaca agaggatagt ctggaagaaa tcatacctct gcttagcgat 3180 ttcctcgcct gcagcgcttt tcagcttttc gcaccgcaat gtgacctttt tatttgccat 3240 accetgggga acacacatee agteecacea gacatatttt geacgaatag ttteeageag 3300 aagettttta getteteeaa tggatagete ggegaeggtt gggatateee aggggagaee 3360 tgtttcttgc ttttctcctt ttaccgtgaa gcaatatcgt ggcaagtaat cggtgctgac 3420 tggcttgtca aaatccgccc acatacccca ggtgtatgaa atgattccat aagatcggtc 3480 atcttctatc tgatcgtaag gatacacacg ccattcttcc agatggagta gccaacgggg 3540 atgittgctg tcattgctgg ggatgtaagg ctcgccgctc atgittagat agtcaagatg 3600 aagaaaattg ggataaccaa atgacagtaa agtctgggag ttcaacgtaa actccttata 3660 gctggactgc agagttaacg caataacagt ttagaaattt gattcatatt cttatatgtt 3720 gttaccttga gccagcagct tgggctagcg tagtagtgct ggt 3763

<210> 3304 <211> 3864

<212> DNA

<213> Aspergillus nidulans

<400> 3304°

ttcggttcat ctgaaatgga gactgcaggg tcggatcccc gggctcggct cctgctggaa 60 gtggtctatg aatgcctgga gaatgcggga aagactaggt ataggggcga aaagataggc 120 tgctatattg gcgcctgggg ggtggattgg tcggaactca cgctcaaaga cggccagcag 180

cgcaatccca tgattggtgc agctgcaggg agttttttct tgtccagcta tattgcatgg agcctggact tgcgtgggcc gacgtgagta tccctaactg tcagcgcagg tgttgtgcgg gatgacgaac actaactgag ccagcatgtc aattgaaaca gcttcgtccg cctctatggt 360 agcgttgcac gaagcctgcc agtcactata ttctggcgag tgctcgtccg cgatcgtagg 420 tggagcgaat ctgatcctca ccccaaccct tcatatgagc ctttcctcga gcggagtttt 480 gtcacccgac ggaatatgca agacgttcga cgccgcagcc gacggatttg ggagggcaga agctgtgaac gccgttctac tcaaaccact ggatgatgcc attcgcgacg gagatgtgat 600 acgggctgtt atccgagcaa ctgccgtgaa taacgacggg cggacgttga tcttgacgac 660 accgtcggct gaagcccagg aggatctgat tagacaagca tacagaaagg ccgggattga ggacttcaac gaaacageet aetttgagtg teatgggaeg ggaacaatgg eeggggatae 780 cgctgagacg gccgccatag caaagatctt ccacgaggga atctatgttg gctcggtcag 840 tggtcaaatt caagaaatgt atccagctga catactcagc acaggccaaa ccgaactttg gtcattctga ggggacatct gggcttacaa gccttatcaa ggccatcctt tcgctggaga agaagacgct gctgccgcat atacatatgc gagagccaaa cccaaacagt aggatttcct 1020 gtgtgaaagc aagaagagca tcatgattct gacctggcaa cccagtacct ttcgaaagcg 1080 ggcgattgat ggtcccccag gaggagatac cctggccgga gggccgaagg gagagggtca 1140 gtgtgaataa tttcggcgtg ggaggaacaa atgtccatgt cagtagctgc cctctcttaa 1200 ccagaattca agctaattgt cttcgtaggt gatcctggat tctgcatcct cgcttcattt 1260 ggagactege egeaategge ageceactag actegegtat teeeggetae tggtagtate 1320 agcaaacagt gaaaagtccc tgcacaaaag aatagaagac cttcaagagt acatcaagga 1380 gaaaccagac tgtttggcgg atctggcctt tacgctgggg gaaagacgag accatctggc 1440 gcaaagggcc ttccttcttg aatctgaggc actcgagatt ggcgcctttc atattgggac 1500 tgtggattgc aaaacgacct cagaagtcac attcgtgttc acggggcaag gggcacagtg 1560 gccggcgatg ggcagagcac tgatagagtc gtttggaacg ttccgcgaaa caattcagca 1620 gctcgatcaa gccctacaga gcctccggga gcctcctgcc tggaagctgg aggctctgtt 1680 aggtaaagac tgttctcagg aacaaattag ccgcgcggag ctcgcacagc cttcatgctg 1740 cgcgatccag attggcctcg tgaatctact tgcggactgg ggaatcgcac cagcgtcagt 1800

cgttggccac tctagcggcg agatagcagc ggcctatgct gccggagcaa tcacggcttc 1860 agaatcgatt ataattgcct actatcgagg aaaggctatg aacaaagtaa cgcgaaaggg 1920 tggcatggcg gctgtgagta taggacgcga gcaggcgact ccctacctcg tggacagagg 1980 cgtggtgatt gcatgcgaaa atagccagca tagcgtgact ctgtccggcg acctggatga 2040 gcttgaggat atcctcgaga agatcaaagc tgacgacccg gacgtttact gccggatgct 2100 tegegtegae aaggegtaee acteecaeca tatgeaegat gttgetgagg actaegagte 2160 gtctcttcaa gggctctcga caagtgaggg ctctttattt atggtgccct tattctcttc 2220 agtgatcggt atcaaagtga ccgagtcgtc ccagttgaac ggcacatact ggcgccagaa 2280 tetggagtea ceagteeget teetgaeage tgtteaggee gtaetegaet eagaggagga 2340 aaaaagccgt accttcttgg agattggacc acactcagct ctgtctgggc ccctccgaca 2400 gattctgtca gagcacccgc gcgggaaagt gtgctcttat gtggcatcgc ttgtacgagg 2460 agaggateca agaactteag teetetacae tgeegggaae etetacaaet eeggegttge 2520 tgtgaatctt cgtgctataa actgcgaggg aaacatgctt gtcgacctac caccttaccc 2580 ctggcaacat gatacgagat actgggacca gacgccagcg gtggaggcct ggagactacg 2640 caagcacccc catcatgage tgctgggctc acgggtgttg ggctcaacag acatagagec 2700 gtcctggcga aataacctct cactggatga tgctccctgg ctatatggac accggattat 2760 gggcaagact ctgtttccag gcgccggata tattgccatg gccggagagg ctattcagca 2820 gctggtatct aggccaaatg tgagttacca gatcagccac ctcgtgctaa aacacgctct 2880 ttttctggac agcaacgagt gtgtagagct catcaccaac ctacgaccag tccggatctc 2940 ggacatccag gactcagaat ggcatgagtt ctctattact gccgtgcaag ctggggaggc 3000 gacacgactc tgcttgggtc aagtcagagt agccccgccg tcagtagctc ccaccatgcc 3060 actgacagga agcacgaagc tgaagagacg tgtaatgtca gcagcatggt acaaggctct 3120 cagggaggca gggatggact acaatcggga atttcgcggc cttgatgaca tctacggtga 3180 tectgteegt tatgaageea eggeeactgt caagaegaat aatgtatege etggtegata 3240 tgtgatgcac ccaacaacaa tcgaccgctg cctccaggtg ttatcgatag ccatgtttcg 3300 tggcctcgcg cgtagcatca acatccgcag cctccctgtc ctatttgaag agatctttat 3360 eggteetgag catgeagaae tecaegteea ageceaggea gateteggea aeggeagett 3420

catccgtggc gacctcgggg ccatggcgga cgatgagacc atctttcca ttaaaggcat 3480 gagactgcac gttctgggag acgaaggata ctcgtatcag gagagcgagc tgtctgccag 3540 gccagtctgg atgccacaca ttgatttctt accccccaga tccctagcaa agcctccccg 3600 ccctgttaac attgtgagcg agttacgcga tcggattatc gacctgtaca ttgcgcagac 3660 tgcacctcgg gtccaatatg tcgagcctac ggaagagcat ctgcataagt acaagcgatg 3720 gttaatgata agcgaaaacc ggatagcgag gcagagcaca tggcgactat ccgactatgg 3780 ctacgcacac gactgtccgt ttgactcctc caaccctgcc gcgatgacga actggatacg 3840 agagagatct agagactacc ccat 3864

<210> 3305 <211> 3479 <212> DNA

<213> Aspergillus nidulans

<400> 3305

aggaacacgg atccaacgat gaagtaacca ttaagcaaaa aatcagtgtc ttacaagcca 60 agaccagaca aagtccattc caaaattcta gtataattta tcatattcga tttttataaa gacactacag cccactcggc gactcttatc acaatgtcca cttcaatcag accctccctt 180 gaccccgaac tegteactgt teaegeeteg atccetteta tagacatega gacacceteg 240 aageteteag eetategege ggeeattgea eeaatgttea etetegagaa egeaateaaa ggctcagaat ccagcgtgga gcctagcgag atatctatac ccqqcccaqc aqqaccaatq 360 cacgctactg tcttccgtcc taagagccgc acccgctctg tttctgagac tcctggagtc 420 ctgcacatcc acggcggcgg cctggcaacg ggcaaccgct tcttgggctt cacaatgttg 480 aactgggttc gaagagctcg gtgctgtgat cgtcacggcg gaatacaggc tcacgccgga 540 gcatccgcag cccgcggcgc tggaggatag ttatgcggcg ctggagtaca tggccgcgca 600 ctcggaggag ttaggattca acgctgaaaa actgattgtt gccggcggct cggctggtgg 660 aaaccttgct tggggcatta cgcttttcgc ccgcgacagg gaaggcccta ggattgcggg 720 ccaggtcctc atgtacccgt gggttgatga cagcatggcc ttcgcctcga tcacgcagtt 780 tggggacatt gcgccggtga agaaggggaa tctcgcaacg gtgaatgact acgcttttgg 840 caagaatcgc gagtttgcag atatgtatac ggcgccagcc cgtgctaaaa gtctgaatgg

tctaccgcca acgttgatag atgttggcga ggcggatgtc tttcgcgacc aggatgttga 960 gtatgcgacc cgactgtgga gggatggggt cacgacagaa ctgcatgttt ggccgggagc 1020 gtatcatgga tttgatgttt ttgtgccgag tgctgaggtt agtaaacggg ctgtggcgac 1080 aaggctggca tggttgaagg gggtgctggg acagtagctt tcattaaggg gttattcaga 1140 ctataggtag tgtttgaggg ttggttttat agactgcaag tttttctgga gctgttatgg 1200 attgcttgtt atcaaaaatc atgtttttag cccaataatc aggtgtgctc atcttagtga 1260 taattccaac gctttatcgt tatatctaac aacagtttcg agctcttaca agagaaagtt 1320 ctcataatat atagactaga attataacca tattatcctg caaaacaagt attatcttct 1380 acagtctata ttttatatca gatcaagtat gtcggaagaa gcctttatat aacctattac 1440 tgtccctatc tgaagagatt taaccattgc taactagata tcgaacgatg agatctgata 1500 ttggctatac atacgccaca ggagtcgagc aactcgtatc tcaaccggct acataatttc 1560 aagtttgacg gatagcggcg gattcggcag ctcgatttcc agtcgtcaat aaaattttgt 1620 attgggggct tegectegee tetgatette actetgeaat cagatagtga gtttaacget 1680 caatatccgt ggaccttatc ttaccaatga ttccctaaag ctcactacaa gcgcggtctc 1740 atattcacag tattctttct cgaagggacc catctcggag aaggtggttg caacatcgaa 1800 gtctgtccat actgcccgat gtggcgtgat gaggatatct ttggggtaga tatctctgtg 1860 gtggacaaag gcattatgga ttgctttaat tccatcaaca gccccacgaa aaagatcatc 1920 tgaatagttc acacagttca acctttctgc attgggcaaa tgctcgagga ttatcgctct 1980 tggttgatgt ttatcgttaa ggaaatgatc caagggagga ttaagggtgg atgggtcaat 2040 tcgatcaatg cagccgtaga agaaggggac aaatcctcgt tggcatacac catgcgaaga 2100 gaggttctgg taggcgtttg attcgcaacg aaagcggttc aggtctcgac ccattttttg 2160 catatccggg gtcaccgtta tcgtggaact actttgttat cattgttcag agaagacaga 2220 cctattgcgc tcacaagctt catgacataa gtagcacccc gcagctctat ctcgtatact 2280 gaggatgtet cagageggtt gatetetege ttgaegtata tgteageagg gtetaeattt 2340 tgaacacttc gcagacgatt gtcttcagag agctccataa ggctatcggt taaggtggat 2400 aattetttga ggtgtgtgea caagatgtgg ttaagacaag etttegtteg aetattggat 2460 aattgtagte aegteaeatt tgtgtetate aetteaetea aeetetgegg ttteeaaeae 2520

gtctcggagt cggagcatct gatccaccaa caaccgggca gtatggcaag tcaaactctt 2580 ctataatate tttetgttge ettteeegee ateacaatae aagegaeggt teetgaegea 2640 aacaacaaat ccacgctttg gggctgataa tatcacccaa gtcgcgcttg gcctagttta 2700 atatgcgtcg ctagatattt gaataaatgt cgtcagataa atcttcgacg ggctgtctaa 2760 tttgaataac aggctacgtc acggacgagt gttgaaatag gaacagtgca aatactgtgg 2820 acagcagttc gcgtagacag cgatgccgtc gattcaccct cgattgccaa cagcctgccc 2880 actttgactg gcagacggct aggcgttggc tgtagtgtga atgtgcgcgc acgaactaac 2940 cctgaaaggc tggaagatga gttgggtcct gcaaggctga catcaaggca tacacgcgta 3000 taagcactgg geggtagatt tggcttattc tttcatacct tcattcaggg aaaagttcag 3060 cctcgccgac aagctggaag gactatatat agacttcccg atcataattt cctccagtcc 3120 teggacegtt etetetatea tegettttte ttgecaaaat gaaegetatt eagatacett 3180 ctccggtcca gttaggacac acgaacattg acggcgagga aacaccttct tcggtagata 3240 tttattcgtg gcccgacaat attcaagaat tggacgtaac agggtggctc tcctgtgttg 3300 gaagacgcca tttgtcattt ttccgcccat catctcccgc actccctctg tccaatacca 3360 accecattee ggtteettta ggaggacaag atgtteecat gaaaccagta cetteteace 3420 aaccaatctg tegeegteea geaagaggge getecaggag ettgaetgea gagagaace 3479

<210> 3306

<211> 695

<212> DNA

<213> Aspergillus nidulans

<400> 3306

tcgggcggaa tctataatgg cagacattga caataaactg tgatatataa cctcggccaa 60
acatacaaga gttgcgctat tgatataagg ggtatatggt atgtgaacat cagtacgtct 120
gcttgtgaag gttctttgag aagaagcagc aagtcttaga tttctgttga gtacgcttat 180
tgagctcgga tacgcaccaa gattgtcagt attttgggta tatgctagca acaccgcgcg 240
atacgagcag gcctacaggg ctcttgcaga ggaactcaag ctcccaggga gaactgactc 300
agggatcgaa tttttcaagc tggtgtcacg gtggctctcg gacgctgcta acgacagttg 360
gctgataatc ctcgacaatg ttgatgctaa ggatatgttc attcaagaga cagaattggt 420

gttatcaagg ttaacctata gccagcccc gggcagccct taccaaatct cggaattgaa 480 cagccgccag gagccttctc acgaacaatt agaatatcgt tcatattggt gtgatggagg 540 agaaggatgc cattaacctt cttcaggcaa gggtcactta gatcagggtt cactagaagg 600 ttctcgaggc tggggcaggc ttgagaatct ataccacttg cagtcattcg ggccggttct 660 tttttagaca gaatcctggc agtgaagcag tgagg 695

<210> 3307 <211> 7300 <212> DNA <213> Aspergillus nidulans

<400> 3307

cacagtctga ccgagtccag gtcgtgcttg ttcatagtcg caatggagaa gacgacgcaa 120 agegteaggt atgecaggag catggacegt ggetegaagg cattegteat gaagaceegt 180 tgcgacaaaa ctgttgaagg cgcagaactc ctgcgcgatt ggcaggaggc cggctgacca atcacggtta gcgtcgagta aaattctacg acaaccgtat aggatttggc caagagttat 300 ctcaccttaa ggcaaacgtt aatgaaataa ctagcagtga cacttgccct caaaggtaac 360 caaactgtct ccacaacccg agaaaaaagg actgtactct ttccataacg ggaaatgctc ctgtccccct tcgatgatca tgcccgtcga gcgcagctgg cggagtcgct aatttcaggc aaaggagtgc aatgaacaag ataatcagta gagcggcgag gcaggcaacc tgaagatagg 540 ecetegegeg ttttttgagge tggateeatg tegaaegtgg atgegaaaag aegegegaga 600 aaagagacct gacggagatg cccgcccttg gacaggctgg gaagaatcga gctggatctc 660 gaggtaccgg ggcgagccga agatggagag gaagctggtc ctcgtcagtc gctgagacca 720 ttcagatacc accttgggcc acgtacagtt cagcggctgt ttcatgggtg gataggctgg 780 ctacaacaag ctatcatgtc agctgcgccc aaacaattgt tgtgggcccc ggctgtacaa 840 900 acatacetee geaaaaatee egaacgaate etegaeeeeg etaggeeaga gattaggeag cttgcggcga gagtggcgag gccttcttcg ggtatgggtc agcccgccag gcagatcaat gtattggata cccgcccgtc aagaagatga cgagaaagcc gactttgcgt acagaccgtt 1020 cyaaaaatcg tcatggacaa agcaggcgtc aaagtacgag acccgcagac ccgctgagca 1080

tgctcatcgt gatgttcaac gtcgtttgga agtgcgagat gagtacatat gggcaggccg 1140 taggcgaagc cccagaagac aaaaggattg tggctgctat gggtttagcc tagtctattc 1200 gtggagtggt tgtcatgaac ctgggcgttt ggagaagcga ctggtgcagt gtgagattga 1260 ctgcggaggt gcctgtgcca tcaattaggt gatcttgcgc ttccgcagag tcatggttac 1320 ccagttggtt aagcgaaggg ttagaggacg gtgtagattt gggatgtctc agggtctcac 1380 actgagtggt aatctatgcc aaacatattc ctgacgaccc cagacttctc gggacaatcc 1440 atagcgaagt cgagagaagt ttcgtgatca cagcctttga ccgtcttgac tggaaagagg 1500 agccgtagag caagcgaatt gggcgtcatc tgcgcagaag ttcggggcgc tttatcccgc 1560 atgcagggca caagctgcta accegggatt aaggctggtc ccctagcgat ccctcagtat 1620 tcaattgttt attaaccagt taccgctttc gaacaaaatg cgaggtcgac acccattgct 1680 ctcgcctagc tgccttactc acttgccgaa cggctggtcc catactttcg aatacgaaag 1740 cgatgtttag ctctctggcg agcgggccac tgatagatta atgtcaatgc ttgatgtccg 1800 agtgctatca tccgctctct atcttactac ctgcgctctg gctcagattg gctttggagc 1860 gcacggccat acttcctgac ttaaggctca ccaggccggg actggcgcag accgaaagac 1920 attcacttgt ctgagaggtc ttaaaagtaa attggaatcg gacacctcag agggtgagat 1980 eggeetgteg aceggegtea gecaceggae ggaeetegtt caataegeea aagegtttte 2040 cagctgtttc ccgaaagatc ccataagaga agcatttgtc agcctctttg caaagtatcc 2100 cgacatattg agaaaacatc gactgtcggt tattgttcta ctggacagac gggcttcctg 2160 gcgacaacat ggagtgcttt ttcaagtccc aatcatccga cttgaccctg gagtcgctta 2220 tcattgcttc attacgctcc atgaagctga ccgctgcgca tgaataatac tcttatatat 2280 tacaataggt atcgagagag teteaggtea agaaagatet caeeeggegg aggetetgta 2340 agcacaatag ttaggcgacc aatggttact ctatcgagaa tgaatgtgta aatggagacc 2400 gagaacaaag gatccaacct atgttcgcta ttcttctgat ccaaagggca gattctcgac 2460 getgtettga tgggetetat aeggeeeact egeataatea geacatgagt atgeegaeeg 2520 attacgcccc caattgccat gatgaatttc attettatet taaacgtcaa gttagacaat 2580 tggtcaattg tcaactgatc taacagaacc accaaggact tcctctagga ctgcaagcaa 2640 gagagtaagg acgggacagg cagactgata tccatcacat cgaacgttgg gttagataaa 2700

ctccaaggat aagccggttg gtcttttggg tcctcacgta atcagcacaa ggtgaagagt 2760 ggtctggcca tagttgaccg gatgcggatg gccctatctc cattcaagta cagtatggga 2820 gaggetgtgc atgattgget ecgetgtatt aettaaegee ettegaeatg gegttggetg 2880 acaaaagagc cggaatctat tccgccagtt cttagttagc cctgacattc ctgattgcag 2940 ctcacctgcg gcagcatccg actggtttat attttcgtcc agcccagaat tcccgtgtgg 3000 acgtgcaatt gcctgcagtg cgggatccag gccacgatgt cccaaacggc gacaacccta 3060 caagageteg eccaecatga ecaeagtgae catgaecaeg aegaecaage caacteecca 3120 caageegteg ceaaaceact cageegeget caagetataa eegetgttat egeeetetea 3180 ggagtcagtt ttcctaaaca ccacagggtc gggcatcctg actgtctccc tcccagccat 3240 . atcaacctcc ctctctttc cagccaacct cctcctctgg cccgctgccg tctatgcgct 3300 cgctgccggc tgcacgctcc tgacattcgg gtcgctcgcc gatgtggtag gcgacaaacg 3360 ggtttggttg acggggagta tcctcttcgc agactttacc ctggcatggg gtctcgccca 3420 gaccgggacg cagttgatag tetteeggeg ettetgggea ttgeegtgge aatgtgtete 3480 ccctgctccg tcagtctaat gacgagaaca ttcccgtcgg ggagggcgag gaatttgggc 3540 tttgcgacca tgggggttgg acagccactg gggtactcag tcggtctgat cctgggtggg 3600 atctttgccg attcaattgg atggcgatac gggtactata tcagtgccat catcagtgtt 3660 ctgctctgtg ttctagcgtt ttggagtctt ccggatgaag tgcccaaggg cgagcctgg 3720 atgagaggtt taaagggaat cgactggata ggcgcggtaa ttatcggtgt ctccttagca 3780ctgctatcgt ttgttctggc gtcagtactt tcctggacct ggttataccc gtgctgatat 3840 gagtgcagtc agatcactga gagctaccac aacttagggg agacctacat aataaccctc 3900 tttgtggtct cggtcgtcct tctcccgact tttgtgctct gggtaggctg gcaagagagg 3960 aacggtcggc cggctctcat cccaaacggc ctctggaaga ataccctgtt cagcgcgacg 4020 tgcatcatag tcttcttcgc ctgggctgtg ttgaacgctc tgcaatattt cacttcttta 4080 tagtatgacc cttggcacga accgctgatc cagacagctg acgataccag tttccaagag 4140 atccagcacc actctgcttt caaatcgtct ctcatgttcc taccaatggt agtagcaggc 4200 gcggccacaa acatcttcac cggctacacg gtcgacaaga tcccagttgg tgtactggtg 4260 ttcgcatcgg cagtcatcag cacagtgtct cctctaatca tggccctggt caacccatcc 4320

tggggatact ggcggggtcc tttcgtggca atgcttctaa gtcctattca atctgatggt 4380 acgtagattg gaatcggtcc gtatattcgc acccgctgac gatcccacac tagttctctt 4440 cacagtetet aacetaatea tateeegage etateeaggg cacaaceagg etettgeagg 4500 tgctgtcttc aactcagtct ctcaggttgg gaactctgtg gaactcgctg tcagtacagc 4560 catcgctgcc tccgttacgg aacattctca gcaggatacc cttgaagggc ttccaagcag 4620 cttactggct gatgttcacg gctatggtcg tggtctgctt tgtgagttat ttcggccttc 4680 gcggtggagg atacgtaggg aagaaaagcg agtagagcat atatatagct ggagcatttc 4740 aagcgtttca tagattcgca ttcccggtga caccacccat acttcacatg aaaacctaga 4800 ccatgcctag ctcatatttc tgcgtcggtc cgtcttttaa ctagctcatg atagctcacg 4860 caatgcccgc tgcatttccc tctcttggta aacctcccgg cccactgtaa agagagcact 4920 aggagcgctt ttgcggagac gccagcgaac cagaaagcaa ggtgagacaa cggagtctca 4980 ageggacatg atgggaagea tgtetagace agteegttet tgttaggeet aategatatt 5040 tectgtttgg gegatetaea geggetgaat gggaeegage aeteggeagt tggegtggee 5100 cccgcttcag ctcggctgcc cggtggatct gactgtccgc tatcttttcc tactatcttg 5160 ctgtgactcc ccaacaggct gcatatccag atgcagggat attacgcctt gcattaccat 5220 actcaagaac gccaggcaat ctcactcaac acacaccttc atgagttaca actcgcacca 5280 tggcactttc gtacaatctt caagatctta tcgcgacaga catcgcaacc gcccttccta 5340 aggatgcagt gacagaggtc atctctcaag caccgttcgc gtctgttccc ggtatcttca 5400 acctacgcga catcagcggt gcggattcgc ctctgtatcc cttttcagtt aacctgcgaa 5460 ccggtctcgt atatcgagcg ggtgccccgg cctctacatt cacagaacat ggtagagctg 5520 cgctgaacac cctcggtatc aagaaaatct ttgatctacg tcgtgtcgat gagcgcatca 5580 agaatcccag ccctgtcatt gacggcgtcg acgttgtatg gattccgtac gcagaagggg 5640 gtgcccggcc ggcaactgtc cggaaccttg aagggtccat ggaacaggtt gtggaaatgt 5700 acatgggata tetggagaeg catgegeega tetacaagge egtetttgag cacatteggg 5760 acgagccaga gacgccattt ctcttccact gttctggtga gtctcgtacc aaccggatgc 5820 tagaaggaat aaaaagaaag aaagaaagaa agaaaaacta atggagatgg atggcttagc 5880 cgggaaagac cgcaccggtg ttctcgcagc cttaatccat cggctggcag gaagctccaa 5940

cgaggccctt atcctcgact tcacactaac ccgCgttgga cttgagccgg gtcgcgcggc 6000 gctcctgaag atgatgcaaa gtgtgtacgg cgagtcagtg ctcgacaacc cggtcctgcc 6060 ggtggtctgg ggagttcacg gtaccggcat ggtggcgttc ttggaggctc tcgacgaaqa 6120 ttatggtgga gtgactgggt atctgaagaa cgcacttgga ttttcggaca atgacctcqa 6180 ggtcatgaag gcgaaccttt tactgaatcc agagtcgggc agtcgcctgt gatacaacct 6240 gagaggaagc tgtaggatgt gttactatca cttttattat ctgagcccag ctagttatgc 6300 aggcgcatgc acggtcgctc tttctatttt gggtagcaaa tatgcatgtc actaaattat 6360 gctctccact aatgtcatgc acgtgacttt gctcggcggt ggaactcggc ccgacaatat 6420 tttcttgctc tcttccaagc cgctacttat cgcagcaaat cctcacgccg ggttgtcgga 6480 ctctcctttc agtacagtag agcttgaccg ctatacatct tttgccacaa tgggtattgc 6540 aaagaaaacc aagaagttcg cgcaggtctg tcagcaccaa actcgaattt tgaccggaga 6600 cagtegetga tacteageag atgaagegea egateaaage eegeaacgaa egacteaaga 6660. aaccagaacc geegaagaaa aageetgaeg agategtteg teatgteeaa aeegtteeaa 6720 caaagctgtt ctttgttgcg aacactgttt ttggtcctcc ttatcgtgtt ccggtctaca 6780 cccacttcgg gtcatcgcta ttcgtgcgat gcttgattaa catcctggct atatqqattt 6840 tttctatgtt aacctgctat tactgattta aagttgcttc ggttgtttat ctttttctgt 6900 tctgttcctc actttcttgt cggtgctttg catattcgtt tgggggttctt tgttcgtttg 6960 tgtattgttt ctaatgatct acttgtgcat cattttttaa atatttgtta ttttcttttt 7020 tatgggccaa aacttttgtg aagcatggtg ccaattcgtc gtataaatct gtatttcttt 7080 tettteatee teetttaggg gatttttatt tittaaetgt titatttttt aettgtttat 7140 gatectictt tactittact ataatetita ticcatatit actitecteg tittititit 7200 tactaaatcc tattgtttct ataatgtttt ttactatcct ctatcttttt ctttatccta 7260 tttgttacgt ttttgtaatt ttatttttct cgtattttgt 7300

<210> 3308 <211> 873 <212> DNA <213> Aspergillus nidulans

3308

<400>

gatccagctg	acctcgcctt	ctcgcagccg	gagttcaggg	ccaggggaag	atccattgac	. 60
taaaactgaa	tagcgctctg	agcatgcctc	attgtaaatg	tccgctgtaa	cccgcaagat	120
atgatcgggt	tgaaaagagt	ggtcgtgtcg	aacagtgctc	gctcgactgg	aaactgccag	180
ccctaaaagc	agggccagac	tgccgtagat	tgcatgcatt	ctgtcaaaga	tgctttcctg	240
tgtatggcga	gtgagctgac	agcccgtcct	tataagcaag	gctcctttaa	aagcataata	300
tgagtcgctc	gcaatgatcg	gcattcatca	gcaatacgat	tggtctctgc	gtaaacgtct	360
gcagggctcg	attggagccc	aatcccctaa	agagccgaat	cctgcgccct	gggaggcctc	420
tgccgcacta	gcggagcggt	cagttcattg	tcctattcac	ggtcttgcag	ggggcgatcg	480
gcattcgagg	aggctcagct	ctttatagcc	cacgttgtga	accagcctcg	gcatagacga	540
gctacgttct	ttttgaacgc	cgcgaacttt	tactccgaga	ttgatcaatg	gcaaatacgc	600
gtactgcaag	ttcataataa	gtgttcgcat	tgtagctatc	gctcattgtg	ctagggttct	660
ttctggctta	cgtttgggca	cctgtgccac	gacctgcatt	gtcctcgcac	agacgcccaa	720
aatctgatct	gtgtaaacgc	atgagtggtt	tgacatagta	ggcgctgcac	tgccctccaa	780
gtctccgtgt	atactcgcgg	gagtaacttc	agccgacgga	gataactaca	atgtggagta	840
tcaggcgacc	tgtcaccgac	cagagcatga	tag			873
<210> <211> <212> <213>	3309 458 DNA Aspergillus	s nidulans	. ·			
tgaaaagctc	aagagaacct	cctggcgaag	ggacttctgg	aactccgaag	gtcaattctc	60
				gtcggcgccc	•	120
ttgaacagcc	gagagaaccc	tcagtaccac	cagcacccag	taatccattc	cttgaacagc	180
caagagaacc	ctcaccatca	ccaccacagc	ctcctaccca	agctcccgcc	cctgcaacca	240
tccatataga	aagcgctgct	ccccacccc	cggctaatat	ccatatagaa	gctccatcag	300
ctcagcctgc	cccaaacatc	cattatggag	cgcctgcacc	ccctgcaccc	gttatcttcg	360
agactccggc	accgcatgga	acgtctaggg	ctccaacccg	tttgaatatg	ccctggacct	420

tccatggtcg ctcttgcgcc agaacctgtg cctagaca

<210>	3310	
<211>	3297	
<212>	DNA	
<213>	Aspergillus	nidulans
<400>	3310	

ggaggggatc tcgctcaaat agatggccgg cgcagttggt tttggcgctc tgcgggaata tegagaegge gettatetge geteaagteg etgaettgae ggagaaaeag eeceggagtg agcatatggg atgtagcaag aaagacgtcc ttcttgaaag tttcagagat ctcatagcat 180 gctcgggatt cgccgtatgt ggcaccacct gccatgaaaa cgatgatgcg ttgccgtggc 240 tgctccccgg tcgtgcgtgt ccgtgcccag gtcggtttcg cactccggag agatgcttgc 300 gaaagagtgt cttgctgagt tgccatagcg tctgcatcag tctgaggacg tgtgtgaggg aatatagacg gatccaacgt tcctcgaata acgtcttcta gcatcatttt gacgttgagt 420 tcgtaacggg agaggattcc ttcgtccgaa tcggctacca caggcggttt cctattgaaa 480 agtggctgtt cgggcggttt gtcatccttc aatggtttgt caactctggc cccgagcaat 540 ccgagattag aaatgacatt tccgtcctga ggtggaagtt gggcatgtgc catgagtttc 600 ctgatgtcgc cagggagaag tccgttgcgg tatatgatat agaacagtaa gagtctgagc 660 ctgtcagtat ggatgatagt gtcatcatca agtaactgta cgagctgtga tgccagccc ttggcctttt tataattctc gtcaagcccg gttgcgaggc actgctctac agagctaacc tcaataagtt tatgatcttg gaagaacttc atgcattctt ccgccatgtt tagatgaagg 840 gtatacgcgt ctctgccttc ttggaattct cgaaggccag ccagcatgtc tttaataatg cccacgtcag ccttttggtt actggggcga gttagtaaaa tgattcaaga tcgtaggggg gtgcatactc ttccgcaaac tgtgggttag cggctcggaa cctggcgaag tcttcaccca 1020 atttacctag cacgtccttc atatgcatat gcctgtattc tacccagatt ctatcgtgat 1080 cgttgagctc catctccttc acctcttcat tcgtggtgcc tttgttgaca accatcttat 1140 acgtaatttt gtccccttcc tttatgggca gcaagtcgtg aaccatggac tgatacgtga 1200 actcatggat caaaggcgcg aacagatcca tcgatcgatc tacgaccaag agcacacccc 1260 ggggtcttgg agaaggaggc gggaaatctc ggttgaactg cgcgaattgg tctagttcct 1320 cttgaataaa tcgtgccaag tgcgaacaca ggacactggc ctcgtgagta ggtgtcctcg 1380

gccgatagta tctgaccaca ggatattctc ccaatgtggc gcacaaagat acggcctgcg 1440 cgtctgttag cagtggcaaa taacgacgat aagaagctgg cctaccttgt gcgccaatgt 1500 tgtcaaatgc tcgcgaataa gatggttaca gcccggatgg aacaaaaccg gaaaactcca 1560 tgggtctcga aacgtgacaa ggcgcgattc cctcggatag tagtcgatac tgatggtttg 1620 gaaagccgcg acttgctcct gaaccatctg tgaccgatca aatctagcgc gcagcccgg 1680 attaagaact atcaagcgtg taagaacggg gcataatcgg aaaggtaaga gttgaccaac 1740 atgatgtcca caccagatat gactttctgt atctcttcct ctccagatca gccagtacgc 1800 aatctacgat gtgcggaagg gcggagagga tataaagggc atccatcgac tggttggtgt 1860 tccgtcggtg ctcgatctgt tcaatatctg gcggcggagc ggatcagaca atgagctgtc 1920 ggtgcgaacc acgaggttgc acttacgggt gacattaagg ttaaggatat catcttcttt 1980 gacgacattg tctatcaggc tgcgactgcc ttcatctaac accaggactt tccactgtac 2040 acgggcacgt cagttcggcc gcgaagtcag atcaggaggg gaaaggcggg ggtcgcgatc 2100 gcacattgtc gcctccggca gagcggatag tgttcaggat gactagaaac cagatccaat 2160 tagcagctgt gaggtaaagg atatcataat gaaccatttc gctgtacgac tctctttccc 2220 gttgaatgtt aagtagtgag ctcatggggg ccggccgaca gccctcagaa gggtttcctc 2280 gaagccccgt gattcaagca gaccagaata ggcagcagaa tctcaggtgg agtgatgaaa 2340 gcagttacac tggcgcatag ggtgcgtggt agttactgaa cagagtgttg tgaaaaaaag 2400 caccetgitt atgaaacgia geatggetee agagagiaeg cagateeeet eegeggitge 2460 cgccgttttg cgatcctgca gtttccggga cctggaggcg acttttttga tcttgcgcct 2520 caactacttt cttgcacaat catcacccgg cttctcatca actcgtccaa tgccttcggg 2580 tettttegeg gggaetagat tttacaaagg egtaeetttt eegtteteea teggttaeta 2640 ccctctatga gaagcttcga atgcacagag cgcctccgat caagtcggcc ctgtgctgcg 2700 eceteaacaa aacaacttea ttgategage eggtttttee etettteee taagegatee 2760 tagagtaatg cagccatggt ccagccgagg cagtcatgca ctgtctgggg cctttcgaac 2820 tttgcgccct ctgcggcgca ccttcaccac aactcctgcg tttgagagag ccaacatata 2880 caagaaacaa acgaagaagc ttgccaaaca agcaaaagaa acaggagtat gagtgcatqa 2940 ttatctctat acggccatat gctgatgctg cccacgtgta gggaaaattc gatcccagga 3000

gcgccacgcc ctcgacacta tggagacatc acaggctcgt caataatttc ccgcaactcg 3060 tcacaagttt tctccgggaa atgaaagaaa ctgatttgtt gaattcaaag acaagtgacq 3120 agctttggaa aacgtttgag cgcttatttt ttaaacgcct gtatgttttt taaaagcggg 3180 aaaacactaa acatggtttt ttgctaaacg cgaagcgccc aaggcacaag gcttatttta 3240 aagaccgcct ttgggggctg aaacctgaac tgggaaaatt tttgtttgcc cccacct 3297 <210> 3311 564 <212> DNA

<211> <213> Aspergillus nidulans

<4.00> 3311

gaggattagg cagtccaaaa gtagcaggcg cgttagaggc gtcttgacga gttgagagag 60 tctcttgatc aagagagtcg ccggtgcgaa ggtgaatctg gggatctgcc tccagatccc ttgacgcggg cggcccaact gggacaatgc gggatccaaa ctcgacgcca attgtgacat 180 cgtgtgtaga agaaaaccga ccctcgcata gccggatggt cagctacaaa ggcgtgatgg aagggttagt tgacagtttc agtagaagtt atcggccgaa catacgctgg atttcccggt 300 tccagaatca ccgatacaga caagtttagc gatataatcc catggctgtg acatgggtac 360 cgtggagtgt ttagtgttgt tgcggggagg atgtttttcg aaggattgaa ttaggccaac 420 ctaaaccacc atagagetea tetggggetg ttgetggaaa ecacaaataa aggegtaega gtcgctgatt ccggaatatc agtcagaacc aagctgatca ggatactaga aagcaggagc 540 attagtttgc gttttgaagg ggat 564

<210> 3312 <211> 1099 <212> DNA <213> Aspergillus nidulans

<400> 33.12

ctgctggtgt ttcccgacta tctcattgac gtttctgcat tttgctctta atggtttttg caagagccca cgggagtccg gtgtgatttt catgttttcg tgggctgttc cttcttggca 120 acattccaac accoggotgg tootgtgtgt tottttotog cacatgatgg agttotttto tttttgatca ccttctacac taattctgga ggtttaccat accctcttgt gcgcgccagg 240 ttttttgaage cattgecagt egageteege ettgacattg atacetttae ettttttgt catatattqa ttttcqcttc cctctttcac cttttctqqa taacttttat ttcatcccat ttgatatttg gatcattttg tttaatgtct gttagaatcg ttctgatgtt atgcgtctat gccatatccc cgcctgttac gttgatattc tagtctttcc agtttcgagt ttctcctctc agcaatttgt tgttgttgtc tcagtctgca ctgcattgct ctacatgtca ttgttccttt 600 gtggcacatg ccatgctcgc gtggtagtgc cctgtactat aagtaagttg aacacaaaat 660 acaagttggt ttggtggaag tattggttca atttgtactt agtggttcta tagctcgagg 720 tcgtagctgt atttataagc cattggcgta agaagtacat atcgaaggca gcttcagctg 780 tacacgccaa gacaatagag acatactcac aataaactat cctctgtaca gagtagggtc 840 aatattggat tcaacctgcc ataaaaagta gatgcaaaag ctagctagct gtatatacta 900 cgggcatggt tatccgcaga caggctcaat aaagccaaca gtccatttca gagaccccgt 960 gatgatageg aaaaateeca gegeeacaee tacaeteget aeteegtaaa tataegeate 1020 tatccgcttc ttcagcaaaa aagctcgcac ccatgaccgc tgttgtgcgc acccaaaagc 1080 catcatacac agcacccgg 1099

<210> 3313 <211> 1319

<212> DNA

<213> Aspergillus nidulans

<400> 3313

ctctattgcc gacgaactgc tcctggtcga tactcgcgcc gcatggcgag acggacaggt 60 gcgcgatctg tccgacgcgg cgtacgcaag ccgcagcaag acccgcgtct acagcgcgac 120 ataccgcgag gccagccagt gcgacattgt ggtcatcacg gccgggtcca agtacttata 180 cggtaggtgt ctggcatttc ccagcatcct ggctagtggt gacggtgact ggacttgcat 240 gggaacaggt caaaccagca tggactattt gtaccgcaac accagcattg tgcgctcaat 300 catcaacgag atgaaaccgt tccggtccga taccgttctc cttatcgtcg cgaaccccgt 360 cgatctcatg acctcgctgg cgaaggagct ctcgaacctg ccgtccgcg aggtcctggg 420 ttccggcacg ttcctcgatt cgatccgct tcgcgggctt ctggcagacg aaaccggcgt 480

aagtacaacc ttaatcccgc tggccgtgcc tgttggtgaa cacctttttc acttctcatt ttttttttca tttttttgtc ccacttgcac aactgccatc ttgaccgcta gataagaact ggttgcttct tccgttgtaa aaatgtcaac accttgaaca tgccactgat cgtctagctt 660 720 gcgcccaact ccctggacct gtatgtccta ggcacccacg gcgactcggc agtggctgct tggtcgtgcg ccgcagtagg cggagtgccc ctgaaggatg cactggggct ggagaagcgg 780 gtcgaggaga gcctcgtcga ggagtgcaag caccgctcgc agagcattgt ccgtgccaaa 840 ggagcgacga cgtttggaat cgggtcgatc gtgtgtagta taagaaaagt cggtgctgct 900 gggcaggcac aacgtgcggc cggtcagcca ctaccagccg cagcacgggt gctgtttcag cttgcctgct gtgctggtga ggaagggcat tgtgcagaca tttcccgtcc cactgtcagc 1020 ggcggacgag gaagggattg cgcagtcggt gggagcattg aagagtacgc ttaaccgtgt 1080 gctggacgag gagaaaggaa tacaggtcta cagtgtagtg tacttgtaat ggcgccgtgt 1140 cagtaatgga gaagcattct cattcgaaga tactacaata agccgtagac aaacaatatt 1200 agtacagtga gtgaagagta catagaagta aacagtagag tatgatctgt agacactggc 1260 ggcatatcgc atctagctag ggctaggctg gagattcacc tgaagaaagc gccgcctgt 1319

<210> 3314

<211> 1693

<212> DNA

<213> Aspergillus nidulans

<400> 3314

ataatcaaat tgtcggcggt ggatcttatg gccccttgct tgaccggaaa gcgagcaggg 60 cgggagggtg ataaagacgg gggtatgctc caaggcgaag ttgacttcct tccccgtccc gggctgtctg aaagccagag aagcgctcca gagccaggta cccccacgct cgaactggtg ggagcgatag gcgcggcgga gatccagcga acgtatttcc cacgcggcgg tgtcccgttg 240 300 cggagggggc aggttgagaa tctccggctg gtttgtgacg cgccagagtg gccgaaggtc cgggtttccc gcaatgacga tgtcccgagt tgactctgca gaaggcgggg ggagcattgc 360 ggaggccggg ttgaacgcca ccgtcgtgat gaggcagtgt gccgcggggg cctcctcgtc 420 cacctgtgtg tgcaacgttg ctgttgggca tgggccgacc cagccgttga gcgaggtgac 480 gccaggtagg cagccgagaa cgcggccgag gactgagcgg ctgcgccagt agctgcactc 540

gggcagcgcg aggccgcatt cgctatccgg cgccattccc acgctttgga atgccggcgt 600 gctgaggatc agcatcgcca tgaggacgtg tgcgaagtgc ttgcccggga gcatcacggc aaagagccag tccatctgga cagggtaaac gggttcgtgc aacgcaagcc agtcttcgca 720 ggccttctta gcgcaacgcc ggacggcttc aaggtacggc cactgcatcc gctctgcgaa 780 gaggaacagg ccctcgagct gctgctcgtg cttagccggt cgcggcgcga tcgttcggcc 840 catggggtcc aagtctgcga ttctccgagc gcgcatgagc gcgctttttc tttctcgctc geggettget egattgeett eageteegeg etgagegegt ettgtgettt gteeaggtee 960 tggaggatcg gtagcttctc gtcgaatgtg tgtgcaaggg ccacggcttc gcggaaggcc 1020 tcgcgcgccc ggagatagtt cttgtagcca ggcatgccct gcccaggagg acatacccgg 1080 teggaegatt egggteeage atetgeagta ceacagaata eettgetgaa taeetgtaga 1140 agctggaatc tgagcagtca ctcgaccctg gcctggacgg aatcgacaac gccggattaa 1200 cacgcagcgc tctgtagaag aggaccgcag cacgctgaaa ctgcttcgcc tcggtagcct 1260 cctccgcgag acgaaccagc tcccatgcct cctgccgatc ctgttcggat acgccaqctg 1320 atttggcatc ctgcacttcc cgcgcgagcg aacatgcccg ccaacgtgga tccttgtgtt 1380 tgcaaaccac cgctcgctga taatcaacga cgcaaggatc gcacgcgtaa aacgaacata 1440 tateceette gtaeceeegg eccattgeat teccateeee geeeeegagg caageegeag 1500 cgcaagtccc tcgccataac catgcgcatc cagtcggccc acgccccctc atacgagccg 1560 teetggaaac gegteatagt ateageaata aetgagegge eegaaagate eteetgeteg 1620 tggtgaaacg caaagaggaa ttcgagcacg cgctcgctgt gccccatccc ctgcatttcc 1680 acgaccccgt tat 1693

<210> 3315

<211> 649

<212> DNA

<213> Aspergillus nidulans

<400> 3315

gctctcccat cgttctagac aactcgtaat ccgaggtatg atcttcattg ccccatgagc 60 cccctgcttt ttaccagtta taaagcttct catctaggcg ttgctcatca gacggactcc 120 agtcacccgc gttcagccgc tccctcttc tcatctcttt ttcgacgtcg aattcgtggt 180

tttcgggcag ctctagctct ccctcatccg taagtatcca aaagtccaaa gactcaggtt cagtettgcc cgagttatcc tgcgcagett tgctccgtag aatagettta acceactgag 300 gccgggcagt aatcccaaca cgggataaag ctttatcgga cgcgactgtc acccacctga 360 acatcaaata gaagattgcg cggaagaagg aaatcccttg gtaacatcga acgagaccgc 420 ggaaggcacc aacaccgcca gggttagttt ggtatcttga cgttcgtggc ttgttcttag 480 gcctctgaaa tttcttctcc ttgccataac cactctccca ttcagaggcg gcctcttgaa 540 cttcaaaggc aacaagctct cgattctcga aaggaaaatc cgccggtaaa gtaccagagg 600 cctgctgcac tgagcgcacc cggcgagatt gttcaatttc tgcgagcct 649

<210> 3316 <211> 2029

<212>

DNA <213> Aspergillus nidulans

<400> 3316

aagctctttg aggctggtat cgagaagagg tttaaggatg ggggtgttac aattgcgagt ategteaatg teatgaatae geetteeeee gaggaegagg eggeeggtat egatgaagat 120 gggctcttca accaggccag ccagttcgtc gggtctgtct tcagccgtaa gttgcggcat 180 gccgtgaact cctggctccc tgcgcgtgaa accgtgcaag ccgcctacac cgaccggaag 240 aacgtgcacg ccagcgggaa gatcatggtt ctgcctcaag gcggcgtgcc ctggaaggag cacctgtaca actttgagaa ggaggcaaag gcggctaata ttaacggcaa tgcggaggac 360 gccgaggttg tgtatgtgct gtacccagag agcgcggccg aagggtccaa gtggcgtgtg 420 caggctgttt ccgtgaatga ggggagcttc gtctcgcgca agcctttgcc cgagaagtgg 480 cggggtgtca gggatgcaga tctcgatgga gttcttgctg gtgaaggggc gggtatccag 540 agggggcggt gtttgtgcat gcgagtggat tcatcggcgg ccataagacc agggaggggg 600 catttgctat ggctgctaag ggctctggaa taggcgttca taaaaggtct agtggagtgt 660 tacgggttta tttagataga ttttcatgaa tcatacccat gctatgtctt ctatatacat 720 ttctaattga gtgccctacg catgtaggaa atcgttgacg accgccttga acgcctccgg 780 ctgctcaacc atgggcaggt gcccagctcc agggacaatc ttcagctccg caccccctc 840 aacetteaaa teeteegeea tetgetteat egtettegge aggacaceat cactateace

cgccacaaac aaccccttga cggacgcctt ctgcattctc tcgcgcacat catatgcaca 960 gagegeetge ategeettet taaaceegae aaggetgtte geacgaacaa catettteac 1020 cttcgctgga acttcaggct gtgtctcgta agatttctcg gtgaaccatc ggcgcaccgt 1080 aacctcggac aactcctcac cgataatggg ctccttcgtc tctgggtgag tggcgccctc 1140 agacteggeg attgeggeac ggtegtteea egettteegg tttgttteag gageagaget 1200 gtttgtatcg caggagataa acgtctttac gcgcgatgga tagagcaggg atgtattgag 1260 aaccgtcacg ccgccgagac tcacgccgat caggatagcc tgaggggatgc gcagggcatc 1320 aaggagagcg atgatatcgc ctgccaagac gtcgacatta atgggtgttt cgccggcagc 1380 agcggaccgg ccgcgcgtgt tgtagcggag gatgcggaat ttgcggttgc gctcctcggc 1440 gaggaagete tteaegaaeg agteecaaat ggtgtaatea aetaggatag agttaetgag 1500 aacgatgaca gatgagtgag gatctgtaga gccttcgagg cgatagggga tctcaacgcc 1560 gtcgggggtg gtgatgtaag actccacggc ggggttggtt tgatcgggga gagtccgggt 1620 geggeegteg ttegaegaee aggggeegat tgtatetgge gaegeaagag ageegagete 1680 gcggggcgca ggcccaaatg tataggccca gttgtagaca cggcgggtct tggaggtcaa 1740 ggcatcggcg atgcgggcgc gccagggggt ctccatggac gccttgtgct caggtccqcc 1800 gaggccgttc tgcggtgtga actcgtgcag ggcaacgaac tcgcgctgag ctttggggtc 1860 gatggacgcc gtgacgaaga gccgactgcg gcgccagccc ggcacgcgcg caagcatggg 1920 gatgtgttct tccttgtacc aggccttcag atcgtcttcc ttgtcggcgg ggagagtcga 1980 gtgttcgaga taggacgggc cggaagcagc ggtatccggc tgatcctgt 2029

<210> 3317

<211> 890

<212> DNA

<213> Aspergillus nidulans

<400> 3317

atccataagc cgctcggcag acatgaggca tagaaccggg cctccatgtg acctgcaaag 60
gattttttg gcgccagagg ccagattcca gaggccaggc tggccagcat ccaggaacag 120
ccagacgatc gggattaaaa gaacccgtca gaatcgggag acagtccatc ccgtgaccaa 180
cctgagcttt tgaaataggc aggtgtgtcg aggtatcttc cttcgtcagg gtcttcacct 240

aggeteaceg gegattetgg actgagegae tgeatagate tgeeatgegt geatttggae ctgatttatt ggggctcgac ccactgacta taatcttgga agctatqatq ttatcaqccq cggagtaatt attcatgcct tacagtgttt gacttctatt gatcctttgt gtttactcaa 420 gagtacaact tttcataaac gggcacggag catctcccga agccagggtc atqcactcgg 480 caagatgccg ataatcaact ggctgagtat caatattcct attcttcaat gggagactcc 540 aacgtgggac cttctgtgac gcatttattc taaccatcgg ctgccatccc gagttcctac 600 ggtgatctca ggacaagcgc gcatgtgttg tcttgcttcc agtgaaacag aaacacacat 660 acceattett cetaatgaet ggttegggat egggagttgt eatgtetate egatteggae 720 gtgagcattg ttcttcggct gggtacatag gtaatgatat gtccatcccg tatccgtgcc 780 aatctaactt catgattgat gctataaatc tgcccgcgct ctcactaact tgggctacag 840 agtcgacgaa gtggtttttc tcgtcaatgc aagtctgggg aattgtttgc 890 <210> 3318 <211> 1180 <212> DNA <213> Aspergillus nidulans <400> 3318 tctctgcata tgcccgacaa cgccctcgaa agaggatctg tcacgatttc cagcattccg 60 tgtttggttt gttacattac aacgctcttt gagtcgtcaa aaagacccat cgcacgagtt ccataaagac ccttatttat tgcgcaaaat cgaagtccag gcggtggatt tcttccaaqq 180 agggagactg ggctttgtga aactgagagc agaaatatcg aatgctggcg gcgagagtct 240 tectgggage gtttttetge geggeggaag egttggeatg etagtaagat egegeacace 300 tacaacacct cttgagtccg tagcatttcc atctgactgc gccactaata gcttctcctt caaccgcacg atgttccttc cactgaagag gacgataaat gggcagtcct tacggtacaa 420 ccacgcatac ccgctggctc acttgcgttc tcggagatcc cagcaggaat gctagatgat 480 agcggtacgt ttgcgggctt atcgtcggag ggaatactgg aaccaacagg ctatgtcagt 540 tectetataa egaggtggtg catgtgtett etetegeatt acagteactg tacgageegg 600 aagacggcga gacccttcaa aaagcagtat atccatcccc cggtggcagc gacgagttca 660 tacccttgtt cttatgcgag aaacgaatag cacgcaaaga tattgaagcc ctacaaggaa

<400>

3320

gattgactgg	cttacggcag	cacggagaga	aaataacgct	aaaaattgtg	ccactgaagg	780
acttgtggaa	agagggtata	cgagacggaa	agactcttgc	tgcttgggca	ttgtacacgg	840
gtctaaagag	agacaacaaa	ctctaactga	aagcgatgca	ttcgatctat	cacgaatgtc	900
caattttagc	atcattaagt	agtggcgaaa	tggacaatct	atcggtctat	ggtagtcgca	960
tcagagcttc	agtttcttcg	ccagttcgat	gccttccgct	attgtcccaa	ttcgggcatc	1020
aatagcatat	ccctcggctt	ccagtctttt	cagttcatca	aataaggaag	ccagcggcag	1080
agtgaagcac	tctatgaatt	cgttgtcctc	aagttgtggc	ttgggatttt	ggttttcagg	1140
gagagacatg	tccacgcgga	catggaccat	gttcaagttt			1180
<210> <211> <212> <213>	3319 637 DNA Aspergillus	s nidulans				
<400>	3319			•		
caccatcggg	ggttttgtgt	tgttggtctt	tagtcttttt	ggtttataag	ccttaacaaa	60
attccagtaa	tttctttcat	ctttggttct	tccacagtta	aacacgaata	gtccaactac	120
actcttgaag	atcatatgag	atatattcgc	gtgtaatcgc	caaaatatcg	ccgaaaactg	180
ttcgtacaga	agtgaagtta	agcaagtgag	gcatggccca	atgcattgtt	cttattaacc	240
gaagggcgtc	gacaccagaa	ttatatattt	ttgtaaacgc	cccattacct	ggatgaagct	300
tccagatgac	agcgaatagt	aggcctatcc	cagggtaaat	tcccactgcg	catactttat	360
ctcaacttcc	tcgacatagt	ctctgatacg	gccaaactct	ttgaacccct	cactctgagc	420
aaaagaatta	tgcttttcca	cagcctcccg	tcctgagaag	agaatgaact	gaccatctcc	480
atcaacgcac	catccacccg	atatatctct	ccccgctca	aagcccttta	aatggtgttt	540
ggtctcggcg	aaggccgaac	cagtaccatc	gatgttttcc	gctgcgacag	tataacgttc	600
gatcgcaacg	acgtgcgccg	attaggggtc	ccagata	·		637
<210> <211> <212>	3320 624 DNA	ni dul ana			·	

caaagaggca aggcaaggga acaactgccc acattgctgc atcatactga aaaatactag 60 agtgtggagt gcgtcggctc tggagtaggc aaggctcgtt ctggagatga ccttcgcatc 120 ttattataaa taggtagacc ctgctgcagg gcccagacat catttgccga atcctaaaag 180 ccaacatgac cgtccacatt gggttcatgc gatgggtcta ggtgtaaaaa taaagcatcc 240 gggcttggac cgcacggaca gggctaacct atcacggatg ccaaatttct gcccctgtct 300 tgttcattgt ggcgcaggca cttggcctcc atacggagca aagtcgaaac agtctgtcgg 360 cctctctcct gcgtcatcat aagcctcgcg ccattcgcag ttttctgcga caaaagcqca 420 caacgtccag cttgcatcac caggaggccc tgtatagcag atgtattcgc aagttttgca 480 actgagaaag ggcccgggaa tgaataactc cttggaagct cacatggtcg tgttttaagg 540 caccacgata caaattactc taatggatag gaaccggcac cacattccga ccagggcagg 600 accggttaca gcacgttgca ggtg 624 <210> 3321 <211> 1604 <212> <213> Aspergillus nidulans <400> 3321 agatggggga agatggggag ggtgggtgcg aaggtgactc gtgcggccag tcaggaagcc gggctggagc cgatcggaat ctggaggttg catgtgctgc agtggactgc gatggcttca ttgtgccgtt cgcctcaaga ggtcatggcc agagtcgttt tttgcataaa aaaaattcaa 180 actccatctt taccacggaa tcctgggcat ctggcgcaaa caggatcatt aggatccctt 240 ggcttctgct aatgccttgg ctcctgctaa ggatttggtg aagagtgctt ggacaatgct 300 tgggagtett gtetegeagt tgacecetge tagtecacee ggaaaageee gecaageete 360 ggcaggaaca caacctcgtg aatagcagaa tgaccaacca atactaccac gcaaagttaa 420 atcatgtaaa ataaataata gaaaagcacc atgaaatcat ctgtgtaaca acactcaaat 480 tgagttette gagaatetae tttgeatgae egatagttga agacaaacat atgatgeaaa caagggaaat atattcaaaa gacttggtgt ggctgtcttg gggatggagg gatgggggtc 600 ggtcgcagat gttacgataa tcttacggga taaaatcggg aaatatccgg ccgagacgtt 660 ttcagttatc ctcaaaccta cctcaacatc agttgacgtt cattttttca gtctctggcg 720

cagatttcaa tgcaatgacg aaggaagagg tagtagtaac aataaaagtg gatgctacag 780 tggaatctgg gttctccaga ccccagattt tgccaatggg tctcggtctt ggtactaggt 840 ctggtactag gtctggtact aggtcttgat actacggagc taatatccgc agatgacagc 900 aatgctcaac aagcaaggcg aaagaggggt cttttacaat ggctcaatac ggtagaatcg gegtttgagg aeggeatega tteaagtega tettetttee tettgeatte tttgteeaeg 1020 cgagagccac gcgaatagcg atgcccgccg cacgaactgt tgccatccct tgcgcaaaga 1080 ctcatgggct gggaggctgc ggttgacatg agatgacagg tctctagtgt cgggataaaa 1140 agaaaacgct ccgctagagt tcaaacctcc agctctcagg ccccaccgac actcataata 1200 atgaaagtca cgcaggactg cctttgggtg cccggtcccg gcttctccag aaccggttag 1260 cgtataacga catatgtttg tgactaagct acttccccgc cgatccgcgt ccttggccag 1320 tttcgcccta tcatcgtcgc ttggggaatg ccagcaatta gccaatgacg gtccgggcgg 1380 acagaaaacc tggagtagac ttgaaatgga gagactcagg atccggagat ggaaccagga 1440 gaagggtgga tcggtatcag cttcgagcca atcaagccag tgggccaccg gcgctcgatg 1500 ttacgctctc tgcccggttc aatcgacaga gaggagtcaa tgggtgccct cttactatag 1560 gcagcgaggt caatggcccg gctgtcatgt ccaaagacct ccgg 1604

<210> 3322

<211> 722

<212> DNA

<213> Aspergillus nidulans

<400> 3322

teggtaaaat geaatagage caatggegeg cetacateae gaaatteaea agagtegeag 60

ctgtatttga ggagacagtt taeggagegt caaatateta tattategga eecaatgaag 120

aactetetee egacageeet ageggeetee aatetgatee tggegaeeea acaacaatee 180

geggeeatgg ttaegtetgg eeegaegaag eetecaagea gegegaaeta atggegtegg 240

teteeegtat agaaggetgg egeaeeaeee gateataeta etettteate eaagacateg 300

cagetatgta etggeeetee egaeeaatee agaaaeeega eetteaeea eaceaegaee 360

geeteeggae eetgaaaetg tetgeetaeg aggetggege tatataeete gettttgege 420

atgeaattaa agattaegee ggaatetgee aactettaae tgttaeaeeg gagageeaag 480

caggeetgtt ctatetetec atgggeetee tteaceegga eeggaaegte egegaggeaa 540
eggeggatet tetegagege ategeeteea eeeeggage egeeaettet gggegeaegt 600
caategette gegaaaaegg egtaetteeg tateaagegt gaaaaagaag eggeegggaa 660
etegteeeet attgteaagt etecaagega eagttteggt eegeageaga gtttggttgg 720
gg 722

<210> 3323 <211> 1115 <212> DNA <213> Aspergillus nidulans

<400> . 3323

agatattgct ttgacgggga cttgctgtgg aaccctgcga cccaaagtat agagatatat 60 tctgtgatac tttttttgta tgtgaggaaa cctcagtggc gtgctggggt tgttggtcag 120 cttccaacgg aagaaacagt tcttcaggat cttgtggaaa gaactgaaaa aaagtgggat 180 ttaaactatt ccggctttcg cgttgaaact cttcctgacc ccaatggcac cgacaaaagt 240 tactcattac attatagcta tgtcgctctc aaatgcatta agccttacaa cgcttttgaa 300 gtctttctgt agggtactcc gcgcgagaag ctgcacccct caatcgagca cgctatgact 360 atcatgtcat cattcagttt gcttgataag taccgcttca aaggctcatg gcctaatgcg 420 tcgatttatt gtcggggcat ctttataggc gcggaactcc ttggtgttgg ggatgcgggt 480 cgtctgaaac caataggcta caaagaaaaa ggcagtcttc aaaaaccacc aattgtggga 540 600 cgtatggtga tcgatgagaa tagactggaa ctgattgagt gcgacgaaaa tcctcaagtt taagcagctt gccgaaaaat accaggtccg catttcaggg aggctctata caactaacag 660 ggaacgagcc caaatgttga acaacggacc accggctcgg cctctcttgc ctctcacact 720 acaggaggta atggacgtgt ttaacaccgt cggaatgggc gggtatggag attggtataa 780 gttgcactct ggggcaactg ttgacatatc tcaggatatg atactcggcc gctgttacga 840 gccagatgcc atgaagctgc tattcaactc tctctcgctg gggtatgact tgccaggcgt 900 cctacgcgcg agagaatact ccagaaatgt cgatgagcgt atccctgagg gcaaaacctg gttctggagc gacttccgca ctcaaacact tggtattgag tcactaaatg gtgaagatgt 1020 cggccactat agcgaaacac gggacgtgaa gatgtggagg gccaactcag gatcatcgat 1080

<210> 3324 <211> 3457 <212> DNA <213> Aspergillus nidulans

3324

<400>

atagagacta gtcttcggaa tttgtaactc atccgacagc tgatccccat tcagcaatct 60 tgtcaatgca tccatgtact ccagagacgc gtatatcggg gccgtgttct ccaqtccaat cgcaatattc ctcgccagga ttctgcccgt gtccgtcgga tcaaactcgt taaccagcag 180 cgactccgat acaaccttcg cttttgccgc actctcgaac ggctccgtcg gcgcccccat ataccacgcc accagccgcc aaactgcaat gtaatcctcc tcttcttgtg gagtcaaatg 300 aatcccctgc cgcggaagac ccagccaaat caccgtgcta ctgaatgtgt ttatcgtcgc 360 gaatgaatcc aggtcattga tgggaaggcc gtagcgcccg gcgtcataat atgtgggatc 420 ctgttccacg agactcatga ttttccgacg cacagcggag tgtaagagtc tgacgcgcac 480 ggaggcgagg tggccctctc cgcctggctt taaggccttg gcgcttttgt tcacttggat 540 tgtgtgctgg actgtttcga ggaggcgcca gcggacgact tttgcgcttg agccgcctgt 600 tcgggtcaaa acttcaccaa cgcggatagc acccctgtac agttcatggt ttattagggc 660 tgggttcagt tttaggatga gatgggatag tcaaaattgg cgatgcgtac attccgccta aaaggctaac gaatgtcaac tgagtcgatc aacatatgtt agctgtcgtc ctgcatgaca 780 cggcacagat agaaatgaag atatcataca gcatttgtga caggcaccaa gtgccgccag 840 aagatateet ggeeaegetg gatetgetee caatecaeee atteeggeae ggtattgatt tgattccaga gttcttccag cttagggttt tgagcatggt tatccctcag cagtgcgtat ctatcccgtt ttgtgggatc ttctgaagaa gccggtaaac tgtcaagtac ctcgttggct 1020 tcatcggcta gggtgtcgca ggttcggatc cagggttcta gttcgctgcc aggacgatgc 1080 tgcggggtcc attcgaagga gtagtcccag taatggtaga cgactcgatt gcccttctta 1140 ttggtggtta cggacatctt gttatttagg tgaagtgtag tgaagggtag atagagatag 1200 ggttgagcgg ttgcggtgtg gtagtatata gctaaatgct ttctatatga ggttcgcgat 1260 eccgaagcag atagcaacga eccgeggtee ggggteeggg eecegggeat agagateate 1320

aggccattag atagtttttg gggttcgtga cttgcaggag agtcacacag tatgctgccg 1380 atcaatggtg ggtatcgcat gtgaagcagg gtcatgccta ctgagtcagt tggagctctt 1440ggcccaacta cggatgactt tgacgagcaa atgccgacca cctatcaaac ttacaggcac 1500 caatgcatta actttcattc tttctcctac tcatgaggcc gcgggtcgag gatgtcacat 1560 ggagaatagt gcgcgacgcg cgacctatcc ttgacggcgc cgccatccgc catatgacat 1620 cttgtgtacc caaacttaag cataggagtc gcttctcaat ccatccaggg cgccggtaca 1680 ttccctcaaa cttgacgtct aaagatgatg cgagcacgta tcaaccttga cttgcaggtc 1740 acacttgacc tttttctctt cctggttcca gatcgcaaag ccaaaagtgt tgtcgccgtc 1800 atagttccag acaccgggag gtacagggaa ggtatgcatc gcttcattca cgtaagggta 1860 gtatctgcca tattggtacc cgttgatata gaggtaagct caaaagctgt ttgaggtttc 1920 gtcgctgtca aagttgagct tcacactcaa cgccacatca tggccagcgg accacatcat 1980 ggccagctgg tgtgttgaaa gcaagattag tgcggtagaa ccggactcct gctcctgtaa 2040 acceptcact aggtgatget eggggecatt tegaategte gaageetggg aggtgecate 2100 caagaagttc ggctgtcaat ccaccctcgt tgtagcgagt tcgttctgga tcgagcgtag 2160 caccggttgc acctcccgct gtcctggcga ccttccaaga ggagaatccg gactggctgt 2220 tcagcaaggt ggaattgacg atgccacgat attcagggat ccggaacttt gatcgtggcc 2280 tgtaatacct tgcatgacga gaaggacatt ctctctgtta ctgaccgtac cattgggaaa 2340 tgtgatctcc ttaatgccaa ctgatgagcc gatgtttccc aaaaccgagc cgatgaagct 2400 tccattcaac cagactgtcc aaccatgagc ggtgccgccc tagacttcaa ggtaaatttc 2460 ateggeagtg ccattaaagt gageaegeea eaggtgeace eegttgtgga ageegtaetg 2520 gttgctgtag agatacggtt ttgtggctcg tcgtgcttgg agtttccata tgtctgcatt 2580 cacccatgca ggcccggaat cagaatagtt agtaagttgc tcgggcaggc tgtcctgtac 2640 tegecagget eegagetegg gggttttgaa ttteecagge eeateaattt gtgeegtaag 2700 actaccccag cgggtcgtct tagtccttaa gcgctttcca ttccattcta tggcctgcac 2760 ttttttagct gtgaagacct caatttctgc agtctcgttg gtgtcgcccc gctgagatga 2820 ctctgccttc gagctgcgct gccctcacca ggtgaggccc tggaccgaaa gctgatccag 2880 cggtcagaaa atgagttata agcgagattg atggagagct tgccaacttg atcaacaggc 2940

<210> 3325 <211> 1223 <212> DNA

<213> Aspergillus nidulans

<400> 3325

acgctttgcc ataaggctcg ttcagcctcc gcaatgtttc cgggtttgta aggcaggctt acattgcggc agacatgcat gtgccgagcg ttgctgtcct ggcgaacaaa aggccgtcga 120 acgccaggct atgcgaagga agctgaagcc tcacctccgc cctatcgacg aggatgtcga ggccgaacat atttgtaccc gtgtttgtgg ccgcatgttg aaatgcggcc ggcatacatg tccggaaatc tgccacaagg gtccctgcaa tacttgcaga gaggctatat tcgaggaggt 300 accetgeagt tgeggtagga eagtettgta eeegeegttg eeetgtggga egeageeeee 360 ggcatgctca ttcccttgtg agcgtccgaa accgtgtggc catcctcaga cgacgcacaa 420 ttgtcacaca gaggacgaat cttgccccaa gtgccctttc ctaacagaga aaacatgcct 480 ttgcgggaag cggaccctaa agaatcaacc ctgttggttg gcagatgtac gctgtgggca 540 aatttgcggc gaaccactca aatgcggctc tcattactgt caaaagaatt gtcaccgacc 600 aggcgaatgc gaagatgcct cacagccctg tcagcaggca tgtggaaaga caaagaccgt ttgcggccat ccatgcacgg agccctgcca tgctccgtac ccctgtgccg agaagacgcc atgtgcgtcc acatcacggt aacatgtggc tgtggacgac ttcgtcagga ccgtcgatgc 780 aacgctatga aagccgtgac atcgaaggga cagctgcagc agccgcagag gctccccgca 840

accageceet tateatgega egacgagtgt geeeggttag agegeaaceg egegettgeg 900 geagetetag gggteaatat caaccegteg accaceatgg egeaaaatae tateteetee 960 acgaacetae catactette tgaaacactg gacatgtaca tecagetete atetacatee 1020 eeeetetega egetteaate ecacgaagea accetacaet eeettgetae aageactaee 1080 caacgeteeg tgegaaceea geeegaaaa tegtetatee gagettteat eeactetett 1140 geateggaet aeggettege gagegagagt tttgaceeag ageeeeaceg acacgtatte 1200 gteeteaage etacaactt gae 1223

<210> 3326 <211> 6365 <212> DNA <213> Aspergillus nidulans

<400> 3326

gaatattcgt tgccacatac ggactttgca ggtcaagaag tagctcaacg ttgtccgccc 60 attggtttct gttattttcc gggaagttca gttccttgga cggccaattc atctgctcca 120 aagtagaccg gagccgattt gtgaattcca ttttcatctg ttctcttagc ctggacgcca 180 tttgccctac gtagtcaacc agatgtggac ttgcgccctc tgcagctqqc tqqqccttat ccaatgattc cacgatgttc cgcagctgag tatacgatgc gattgctaat cgagcctcag 300 actigatati cegeageget teettaetae ggitatiete agegateagg ceaactiaag 360 agcettegta geaceatace teaatteete ageatettte ageaacgega cataactetq 420 tgataactcg agccttcgaa gtttcttgat actggcctca aagcgcttcg ccgcctcgtc 480 540 gctagcgttg gatcctgtca aggtcttgag tcgtcggtca atatcggctt gttggtcatt gaaagcttcg gcttgtttac gggtggtctc gacatgatcg tgggcgtttc gggtggcaac 600 cgagagtgct gcctgtgctt cagctagcta tatgatcttg ttagcagaac gaatgaaagt 660 taactcggtc agtgttggtt catgcctgtt tccgctggag ctcatgctgg gcccgcaatg 720 ttgagaggag cgagtcaagg cttgcgaagt cggcagatgt ttgtatctta tcattgaggt 780 agtetteaac cetegteege tegtgtgetg acagageega caccetgttt gecattttge 840 ggctttggtg ggaaggggag aagaacagcg aacgatggtg tcgtcgcgaa tgatcatcgc 900 egeageaget ecceteeget eggggtegga getettggaa etteeceaaa eeaateaace 960

ataattcagc aactcgctcg acgtcatgaa actcataata ggcaccaacc cagctaattt 1020 tatattatcg ctacctacgt gacggttcaa tatgtcgagc cctgccaaaa agcgcaagag 1080 agacacccag cccacacgca gcatcgcgtc attcttccag ggccaaacgg ccaagcagac 1140 tgagaaatcg gagcagttag cttcgctggc agacacagaa cagcatctat ctgacgaagc 1200 tettgetegg aagetteagg etgaatggaa taacgageaa gatttegegt etecegegae 1260 tgtacctcat tccgaaccta ccgccgcatc cccctcacca gagaaggatc gagaacagaa 1320 gaaggccaag gttggagtgc tctcattgca gtcatcaaca ggaaccgagg acacgatatc 1380 tttatctgtc cctttcgatc agagcccttt ggtattcgat tcctctaggt acgctggaga 1440 gttgaaagcg cactggtcgg cggagggtgg gaatgcttcg tatgctcttc ttactagagc 1500 attegttett geaaatteaa etaceagteg tateaagatt gtegataeat tggteaactt 1560 tctccgggtt ctcattgaag gggatccttc gagcgtactc cccgcagtat ggctggcaac 1620 aaactccatt teeeegecat ateaegaact egageteggg eteggegggt ettegatate 1680 taaagcette aagaagatet aeggeetgaa tageeaaggg ettaaategt tatatgatag 1740 gcttggtgat gccggcgatg tggcgtttga ggcaaaaaaa aggcagagct tcaccttgat 1800 caagcctaaa ccattgagta taaaaggcgt ctatcaatct ctgataaaga tcgctatgag 1860 caagggcagc ggaagtcaag aattgaaaca acgtatcgtg gagaagcttt tacaggacac 1920 tcgaggtgca gaagaaagtc ggtacatcgt gaggaccctc gtccagaact tgcgtatcgg 1980 tgctgtaaag acgactatgc ttattgcgct tgccagagcc ttcctagtct ccaaaccaga 2040 taatgcaact tttactgtgc atagtcaaca cgaactagct cgcctcaaga aggaagaact 2100 cgcagaaatc tatagcagcg cagaggagct ggtcaaagcg tcttatgcca gacatccgaa 2160 ttacaacgac cttgtgccct gccttctcga gatcggagtc accgaggaac ttctgctacg 2220 gtgcgggttg cagcttcata tcccactgat gccaatgttg ggtagcatta ctcgcgatct 2280 ctcggaaatg ttgacaaaac ttcaggggcg agatttcacc tgtgagttta agtacgatgg 2340 acaacgtgcc caggtacact gcgacgaggc aggcaaagtc tcgatattct cccgacatct 2400 agaagaaatg acagaaaagt accccgatct tgtgtctctt gttcctcaaa tacgaggaga 2460 aggtgtttct agcttcatcc tagaaggtga agtggttgcc gtcgatcaaa acggagagct 2520 ccaacctttt cagattttga ccaaccgagc gaagaagaat gttgacattg gggaaatcaa 2580

gatcaatgtt tgtctttttg cctttgattt gatgtacttg aacggcgcac ccctgctgga 2640 acggtctctg cgcgagcgaa gagaattgct gcgaagtctc tttatggaga taccgaaccg 2700 ctttacatgg gtcaaaagcc tcgatgctac gtcagccgat tccgaagccg ttctggactt 2760 tttcaagagt gccacagaga acaagtgcga gggtataatg gtcaaggtgc tcgacaatac 2820 gettgecaet aatgggteeg acageaecaa etetageate aetgeaaege egaaageaga 2880 agcaaaggaa acgaagaaag gtggccgtcg aaaagcttta ttgtcctcgt acgagcccga 2940 caaacgactc gaatcctggc tgaaggtgaa gaaagattac agcgcctcat cagaaacatt 3000 ggaccttatc ccagtggccg ggtggcatgg caacgggcga aaggcaaaat ggtggtcgcc 3060 gatecteett getgtgegea acceegaaae tggaggeete caagetgtga caaagtgeat 3120 gtccggcttc agcgataagt tttaccaagc gaataaggaa aaatacgagg aggggagtcc 3180 taatgtgata tegeggeega getaegtega gtataatggt gageeggaeg tgtggttega 3240 accacaagaa gtctgggaaa tggcatttgc agatatcacg ctcagcccga cttatccagc 3300 tgctattggc ttggtaagcg acgaacgagg tctcagcctt cgctttcctc ggtttctcaa 3360 agteegagag gacaaateta tegatgagge etecaegteg gactaeettg egetattgta 3420 cagaaaacag tcggatcgag cgcgggctga ggaaactgtg aatgcagatc agatggcaga 3480 cttgaaagag tagtataatt aacgactacg ccatttctgc tcagaggttt tcggaccgct 3540 ccctacaggg aatttccccg atgcctgtcg acgatctgca gctttgttac cgttggcaag 3600 agaacgtcaa gggccgaata ttagccgagc gtgcgtctgc agaatcaatt gtagcgacgc 3660 aattgaageg gecatatgtg geectaatga atateatega etateaaaeg tgatttgeet 3720 caaagtgaaa ggagattcca gtcgcaacgg gatcgatgca gatcatatac ggagcgcgga 3780 gtgtagacgt gagaccaaca ataagaactt accttcaggc tcatgacgtc tgaatctcga 3840 aatcctgtcg ttgaagaacc tcgcatggaa aattgcgttg agatccatgg tgtgtcttgt 3900 atagaaagca ggtccgtaca gacgctgagg gtctacagta cgattcactg ttgccaagaa 3960 gatetgaaac ttateagtat tetetgtgea gatateeeac gtgettteea agaeagaage 4020 ttgtacactt aagcgaaaga acagaagatt ttcgatgggt tgcgtctcgt cgaactgcag 4080 ggtcaaccag attcgaacat cacgcaagta ctgagttgtt gcgactgcaa tgcccactgc 4140 gcacagtgca gtagtgggcc caggacccct gaggcccagt cagacgaact gacagtgaca 4200

gccggtggac ttttcctgta actagcctta gagaaagaag tctactctga atccttgcca 4260 aagtgcttca aatagaggcg tcagtgggga cgtcgccagg cgtggaggac ttgaagtcgg 4320 aaaagccagc gccatcttgg gtgactctag gcaggggaat tggctcgagt taagccacga 4380 accatgagee ttgtgetgag ceaattgtge etgaeteaga atttegttga gaegtegggg 4440 acattgcagg atatagcatg gtacgggtct tggaaatccg ccaagaacac caagagtttc 4500 ggattgactg ccgcaatatc taaagccaag acgaacttca atctacgcaa tgtactctga 4560 gtacatatte tatatatgta geegeeetet eeatggaeee tgatteaget teaacateat 4620 ctttctttcg ttgcccaggt actgctggct cggtgcttta gtctttcgtt cccttcctta 4680 atattgacgg tetettattg teacteatta ecgaceaaga tggeeateat tegtteagte 4740 atcgctgcca cagctcttct aggagctgca gtcaacgccc aggttgtggg cactcccttc 4800 ggtttcggtg ctggcaccac tggtggtggt gatgcgaccc ccgctgcacc cgccgacacg 4860 gccgaactca ccgagtggct ggcagacgac gaacctcgag ttattctcat cgacaaggag 4920 ttcaacttcc tcggcgacga atgcaccgac tgcgagtgct gcattcccga ctccaacacc 4980 tgcggcgatg ccggccagaa cgctattgag gttggcatcg gctggtgtgg tgattacccg 5040 accacgacct gtacctatga caacgccggt ttggacgggt tggacgtagg cccgaacaag 5100 tetattgteg gtgttggtga tgetggtgte attegtggta agggtttgeg tatecaegge 5160 acggagaacg ttatcgtcca gaacatccac atcaccgagc tcaacccaca gtacatctgg 5220 ggtggtgatg cgatctccct tgacggcgcc gataaggtgt ggatcgacca tgtcaagatc 5280 tctctcgtcg gtcgtcaaat gttcgttact ggatacgagt caagtacgtt gatcccattc 5340 tecegiteag agecaectet taacgaetae aggeggaage gteaecttet ceaacaacga 5400 gctcgacgga accaccgact ggtctgcctc ctgcgatggc caccactact ggactatgta 5460 agttcgcctc cagtacctgt acctaagcaa tcctaatacc agtcagcctc gccctcggcg 5520 aaaacgacaa ggtcactttc gcgaacaact acattcacac cacctctggc cgcgccccaa 5580 ggtcggtgct cccagcttct ggcacgtcta caacaactac tggtccgaca acaccggcca 5640 cgccttcgac gttgaggagt ccggtacaaa cgtcttcatc gagggcaacg tcttcgagga 5700 catcaactcc gcctacaacg atgacggtac cggtgctatc ttcgccgttg actccggctc 5760 tgaggcgact tgctcttccg tcctcggccg cacttgtgtc gccaacagcc ttaccaactc 5820

tgaatacact gctgtcgcgg atgagagcgt actgtccgcc ttcccggctg atgaggaggg 5880 tgacattacc atcttgcccg tcgaccaggt cgccgcttac gtcctggcta atgctggtgt 5940 tggaaagctc tctgctagtg gaagcaccag cggcagcagc agcagcattg ctcctttcat 6000 . caagtgtccc tgtgattccc actagcacgc ccctggtgta cccqactttt acccctcctq 6060 ccgttgagac caatgccatt cagaaagagc atgaggtctc gaccccggcc qttcctaccc 6120 ccactcctgt tccctctagt gttggaagcc acgggtctac tgccggttct tctcacccgc 6180 cgggtacgtg caaggctcgt cgcaaccaca agaagcgggc tcgccgttct cactaaagga 6240 gtagcaagct ggatccgacc ttggtctgta agatcaacgg atgggacttg tagtgtggac 6300 tttgatcgac aaacagatta ggtgggcatc tagtcatgcc aatattgtct acgtggtatt 6360 tcctt 6365

<210> 3327

1099 <211>

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3327

cgaaggaaga cggcaagaaa attgggaacg gtggcattgg gcaggtcaaa catacaccac 60 caactgtacg gacctggacc ctcttaatga gctgttttgt gttcaacaag caaccgcatg 120 ctgctgagaa agtgagagca atgatggaca aacacggggt tcgttacgac atagatgttt 180 ggaacatgat tatcaacaat tatgccaact cgcaaaacgt ccccgcgctc gcgcgagcat 240 tcaagcaaat ggagtctgaa ggcattaagc cggacagctt taccctaaac cctttacgct 300 acctacgaga tccggagcgg ctctgggttg ctattqatqa qttqqatcqq qccqaattcc agaagggcac gttgggaagt gattggaatg ccgtggggag taggggagaat gtagagtcac 420 teettgagea gggteteeaa agattaaaga caaceecaag geaataagat acceateact 480 cttgttcact ttttatgaca tatattgatt taatggtgat qtcqtqctct ttaqcqttca 540 gtgggttcgc agcatattta ctaaccatcg atcaaagatc ncccatggaa tatgtaaaca 600 tgtatagtac ctgacggtgc aattcactgc tttgcaattg aatttgtatt cagataatct 660 tcatacacag congectgea gtgaaagetg tteteaacea agaacgeeaa gttaettaaa 720

<210> 3328 <211> 1631 <212> DNA <213> Aspergillus nidulans

<400> 3328

aaactccggc gcttctgaac gatatcatgg aacgtctcat tatccacaat ttttccgaca ataacctgat cgagaccctt ctggagcccg ctaaacgcct cattgatgaa ctggtcgagt ggcatgccga tggtggcgcc gtgggcaccc atgtagtcgt gcagttcggc tggttactga gtcagtcttc gatcagagtg cagagaaggg ttacaaactc tgaacagcag gaggcgagac 240 ttcgatcacc ttgagettge tcgactgttt cagetgetea egeagagaga ggacaaacae 300 attcagagec gtettegatg cegagtaage tggeategga geegeaggga caategeaag 360 gttggttccg gtactgtacc acaagcagtt tattcgcata gtcccaacat ccaatgtaac 420 agcgatgaaa catacaagat aaagctcgcc ggctgcgtct cggctttgcg tttcaaaaac 480 ggcaaaaacg catgaacgag cgaaaccgcg ctcgtaaagt ttgtgtggaa ttcgttgttg 540 aacgcctcga gatcccatcc cccttcctgg gtcaaatcgt gtgtacgctg aacaccggcg 600 ttgaggtaga cgctgtcgat atccggatac tttgcagtaa tttcttttac gaactccggc 660 atcttgtctg tctgcgtgat atcaaagacc atgtctgcgc cttgttctcg ccgtacttgg 720 agacaaaggc atcaagacgc teettgegac gacegaegae aatgaeettt gegeegttet 780 cgacgaagcg ctcagccatg gcacggccga tgcctgaggt tgccccaatg acgagtatgt 840 gcttgtatgg gaagggcatt gtaccaatgc tgatgttcta gcattgtagt tccagtatac 900 tgcgatatgc cacgagaaga ttgcgggtgc tacttatact tatttttcag tcccatctgc 960

ggtccttaaa tccatggaga taaccggagt atgtagccac ggcatatcac gtgagcgtaa 1020 gctgatcaac gggatttcgg caccagcttc ttgcgtgaga aaaagccaca agttaatctc 1080 tatgtatgaa gctcattgaa agtaggaaac ggcagataca gagcttgcag agcgagtgtc 1140 aaattctgta gagaggaact gagttggaga aacttacgag tggctaagat ggtcggagtt 1200 aacacccgga gaccgtctag ctaaagggga ttagtgtcat tgcggattct gccataattc 1260 cccgcttttg gtggaattc attggtgacg tcaccgtgtg tctgtccctg catctaaggc 1320 agacacatta cccattgcta ttatgatgtt cttaagtctt gatactgaca ccaattgcgc 1380 gatttcacaa taatgtctgg aaatcctact caacaggtca aggatactgt ttacgctgcg 1440 gcttcacaa ccggtgaatg ggcgcagcaa aatgttgtaa acccaatcaa gacctacgtt 1500 tctggagaaa agggcaatga tgctggtttg tattgccgtc aaatactgcc tatcaccacg 1560 ctaacgcctc gcagagcgaa ttgagcccaa cataccatat gaagagaaca gagaagatat 1620 acgagggggc c

<210> 3329 <211> 5901 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3329

gtttatgccc ctttctaggg aagggcagct cctgagttca cgtagcactc tatagagaaa 60 gtagtgatet caactetaca ettgtgaaaa acacacagca agtgetteaa agactggcag atgtggcatc ggagcttcga gagtactttc ctgtgcccga tcaggagtcg ctgagtggca 180 tatcacgggt gtcaggctac ttgaacctgc tataccatca ggtgattttc gcctctaccc 240 gcccttattc taaagctaac gctctaaata gtgtataatg cttgctactc ggccgttttt 300 gtttggtctt atcgagacgt gcgttgttct agggaatacc aacgtaacag tcccaattcc 360 catacagctg ctcctgcaaa tatgccttga gtctgcgagg aagacggtgc tcatactggg 420 tgcactacac cagcagacgc tactaggtat gataggttac tcaagtccga gtaaaggctg 480 acgctgtcac agagtggttc ctcccattcg accttgagag tacggtatct gcctgcctcg 540 tcattataat ggcgaaggta gtttgcccgt ctttggtaga taacccgact tatcttacgg 600 agagaatgtt tgatatgett gateatatea tagagaaagg aaacettata getgeagate 660

agaagatgga actcagtgaa ttagggagac tttgtgcgga gctcagagcg tccccggcca 720 tgggccgtta ttcagacttt tcaaagtccc atgccttacc agacacaccg ctacatcacc aaatagagee teeaageaea tegggegaeg atgeetggae tggattggee gaggetgegg 840 actgggccag ggatatgaca ccgtcgcatc tgctcgaggt ggtggacctg ctaaacgggg 900 . acgacctgct taactgggtg gaattcgcgg atgcctcgtt agacgttgaa gagaacgtgg 960 ccgcaagtgg attagagtag tgcattgtgc ctattttgta tgctctacat catctataaa 1020 gtccgtggtg tccagatatg gagttaaagt agcggcatcg acctgctcct gcctctcagc 1080 caccgtccaa ccattcccaa accagccaaa ctcattgccg tcgtagggct gcaacttgta 1140 atcctcccat ctgaccttct caagcgcctt caagcaatgt aaactacttc caggccaaag 1200 tgtcgtcact cgccccttct tccggtcctc cagcgaggct cccggtggcg aggacttgta 1260 ccagctcaca cagtcagcac tgtagacggt tcggtcaaag taggtgtcgc agtagtttgt 1320 gaaacgttcc acctgggccc gcttgggctc cacaaggcca atattgtcgt aggccattct 1380 tgagatcagc tgcgcaagat aggaatgaat ctgctccatc ataatcagca ggtttcctgc 1440 gccctggaac gagttcggcc cgagggattg gaagaagttg ggaaacccgt cggtggccag 1500 gcccaaatat gtctcggctc tctgtctgta tttatcgcgg aggttgactc catctcgccc 1560 gatgactggg aagceteete egatetgaaa gecagtagea cagactataa cateaactgg 1620 acggtgcgtt ccacatgatg tagttattcc tgcctcatcg acggatacga tcggattggt 1680 gatcacattc actttcggcg acgtaagagc ttccaggtat cccggcccag gcgtaaggcg 1740 cttacaaagc ggaggataat caggtagcaa ctccttcaag agctctggct tttccctgag 1800 tegatgetge atatetgetg tgtaetteat tegtgeegaa tgttgaagae tgetteeect 1860 ctgcgacttg gcatacagtg tctgcatctc cagctcgagc tctttgcggt actggatgta 1920 ggcggccgtg ttttttgccc atacetgctt etcatetteg gtataggcaa agttgcetee 1980 tttgccggca gtacgtgctg atagacgctc tccaccgtgc tggttcgata tccaggtctt 2040 gccgcggaca tagtggtcca taccctgaac tttgtcgagt agggctggta cgatctggat 2100 cccgctgcta ccggccccaa taacggcaac ttgcttgccc tgcgcataga gttagtcttt 2160 ggaccttgat atgatgggcg agcgtacctc aatctgatag ctttcatccc aggcggcact 2220 atgcagcaac ttcccgttga aactatggag gccaggaata gctggccatt tccactcatt 2280

gagcagtccg gtcccggtga tcagtacatc tgcagagtcc tcaaaaggtcc gtccttctgg 2340 atctgcctcg tctgcgatct ggacaaacca tttaccgatt gagtcgttcc agcgggctcc 2400 aatgcagegg gactggaace tgatatgett gegaacgteg tacttgtgtg caactegett 2460 ccaatactca aggatctcat ccgcgccgga gaagaaatga ctccatcgtg tccaggactc 2520 gaageteage tggtatgegt gtgatgggae atetgaacte ttgtgageet ttttgaaaac 2580 atteccaggt attgtteetg cettaceaea tgeacageea gggtacttgt teteaaacea 2640 agtcccccc agctcgctgt tcttttcgta gatggtgaga tccaagttcg gtacagcctg 2700 geggaacttg atggeegeca ggateeecga aataeeggea eegatataga tgaetttgag 2760 gggtcgcggt tcgtcaaccg ctctctcgga gatgaacggt gagaaataat tgtactgcct 2820 ttcgccgaga tctggttgag cttcttggtc atgtgctgat tcaacactga tactgtcagc 2880 tgttgaggga gctgtccttg ccagtgcctt ggcgtcatag acagtagggg acaatgggag 2940 gaaaggggtc tcggtgaagg tagacatgat tgtgcgttgg tattactgtt ataattcaaa 3000 gtggtcattt ggaactggct tatatcgaca acgagaggtg ctatctcgcc atcaggacca 3060 gtccatttgc gttctcggat cgggttccgg atctgagacg gttcgctgat gcactagtac 3120 accagagact ggattgttta tagcatacgc ttggcttatt gctcggatca tgagtgtccg 3180 ttgatgtggt gggaaagcac gccgagtggc gtcggagggt tttccgactg agagtctcca 3240 actogotting anatoatoot atatgaating thoughtness that cottoge to atategate 3300 egetettete agaetaetag aetgeteaca atgteegtaa accaegttea geeegageag 3360 tacttectge eccegaetee geaegtteee aacageagge tteetgtact tgtgtacege 3420 aatgtcctgg aggatacaag tcctcgcaac atcgtaaaca ctatcgagcc gaatggctgg 3480 atcaagggtg ggcagtggaa gacgtacaag gtgcctcact ttcacaccca ttgccacgaa 3540 tgctatggaa tcatccgagg gggatcaacc tatctccttg gggtcggccc caacgacccg 3600 aaggtcgacg aggagggtag tccatatggg atgaagttga ctgtccaaaa aggggatgtt 3660 tttgttctac cggtaagtgc tacttcaagc aaatgcggaa tgcgtgacta caccggagga 3720 agctaacgtg ggaaggctgg agtatgccat gcttcccttg aatcgtggga taactatgag 3780 tttatcgggc tatatcctaa cgtaagcaaa tcttctcgta cagaatatag atattgacga 3840 tggcaagggc atcctcgagg cgactggtca ccgtttcgat atgaactatg ggttcaagcc 3900

tccagaagag accagegegt tggcgaaaca gagtgaatee gttgcaatee eteteetaga 3960 ccccctctat ggtttggatg ggccgctgcc gcggttatgg agggaggcag cccgttctcg 4020 ggctcgtctt tgagttgtcc cagagagaca aatgtggagg ggatacttgg ttactgtcaa 4080 gcgatagtct atacaaagag aatatgaaat gcttaaaata tgcgtaaacc ttctcggccc 4140 getegttate teteggtaag attittaggt tagtitaaet tetageteta gitggggaea 4200 gaaagataga tacggtatca gaggtcggat cagggtccga gataggcctc ggtttgagga 4260 gaagactaac tagtttggac agctttcccg caaatcttat aagaaagttg gcgtaaggac 4320 caccaaggaa ccattcttgc ttgtcattat cgagcttcta ctatacttgc caattttctg 4380 tatacaatgg cggcaatcac gcccgaaaac gagtctaaga tagcacacga tgcggatgcg 4440 gcaatgagca ctgaaatcgg ccaggttctt catgatgctg ctgggaatgt ggaccaactt 4500 cagcgacgtc tgtctaaccg gcatatccag cttatcgcca tcggcggctc aatcggaaca 4560 ggcctgttca tcaacatcgg tatggggctt gccagaggcg gcccggcaag tcttctgatt 4620 gggatcatca tccactgctg ctttatggcg ctggttaaca actgtattgc ggaaatgacc 4680 gtgttgttcc cagtaagtgg agggtttatt cgcatggcag acaagtgggt ggactcggcc 4740 ttgggcttca tggccgggtg gaatttcttc ctctatgagg ccattctcat acccttcgag 4800 ataaccgccc ccagtattgt gctacagtac tggagagatg atatcccttc ggctgccgtc 4860 acagcagtga cgattgccat gtacgggtga gtgacgttaa ttagaagcga ggcggccggc 4920 taacctcaaa tttagtgttc ttaatctgct ccccgttggg ctttatggtg aaactgagtt 4980 ctggctgtcg tctggcaagg tagtcttggt gtttatctta ttcggtttca cgttcttcac 5040 catggtgggc gtcaaccccc aacgcgatgc gtacggtttc cggtactggg tcagtccggg 5100 gccgctggcg gaatggcata ctggcggaga ccttggtagg tttgaaggcc tgctgaatgt 5160 gacctgggtt ggtaccttta ttgttgttgg gccggaatac ctgtccatgg cggcggcgga 5220 gacgcgtcat ccccgggttt acgtgaagtc tgcatacaag gctgtttatt tccgcttcgg 5280 ecteatette aaeggeageg etettgeage tgggattgtg tteeetacaa tgateeagte 5340 ctgcaatccc ttgcacgcgg tgaacagagc agcagctctg cggcggcctc gccatatgtg 5400 gttgctatga agcatctggg gatcagtgtc ttgcccgata ttgttaacgc actcatcttc 5460 acaagcattt tgtcagctgg taacacgtac actttctgcg cgatgcggag tctctacggc 5520

atggcgcttg aaggcagggc acctggattc ttgagaaaat gcaccaaggg aggaatacca 5580 atctattgtc tcggtgtcac aacgttgctc tcgtgccttg catttcttca ggaatcgaga 5640 agctcccacg ttgtgctgca atggttcgtc aacctagtta cagctggctg tataatcagc 5700 tttatcgtca tctgtatcac ctacctacgg ttcttccggg cgtgcaaggt ccagggcgtt 5760 gaccggaaga attttccata ctatgcctac ctccagccat acggggcctg gcttggcctt 5820 ttctggacgg tctttgtggt tctgggatat gggtactcta gtttcacccc atggaatgtg 5880 ggcacattct ttnctactat t 5901

<210> 3330 <211> 1270 <212> DNA

<213> Aspergillus nidulans

<400> 3330

atgagtaaat ggcgtcttag agccaaggca gattcgaggg tctcgtgaag agactgggcc 60 agcgcgttgc tatcgcgagt ctgctggttg aagatcagga cccgtagctt cttcgctgct 120 gaagetteeg acgaagagte tgeettgatt tgtgatgega accaetgace ggetagettg atgettteet gegtgtgaee teegtetata taccagatga egtttteete etteetggte tgacatette cetetaattg tgeetgttea agacetttge gaaacteege agggagggae tgetetetga agecageget gatatecage ttecetacet tettaaggae ttetecagea gtggcaacag ccagcgcagc gttgccatat tgaaagtcac cagctaggcc gagtttaata 420 tegecattit tetttagate gggatgaetg gaeaegaatt ceageteagt gtgettgttg 480 gcagcacgtt cacgtaaaac cttctccgcg cttggcggtt ggggcgcgct gaaagcttta 540 gtgttcgcct ttatgatgcc gcctttgtgc catgcgatct cctcaatcgt attccccaga 600 agagcaacat ggtcgatccc caagcttgta atcgctgtgg cggctggttg ttcaatgaca 660 ttggtacaat catattetee acegatteea cattegataa eggetgeate caegeeetea 720 ctcagatagg tatggaaggc catcagcgtg agatacctga aatattgggg cttcgtctgt 780 aggttgtttg gatcttcccc ggccgctcgg gcagcgtcat caaggcggtc ccacacttca 840 aagaagtatt gagcgaacag ttcttcggaa agaggttcat tgttgattct gatgcgttcg 900 cgggcgaatc gcaagtgggg agaggtatac aggccgacct tgttgaatac cggtgaagat 960

gattgcgaag gcgtaaattg atagaggatg gaggagatga aactggaggt cgagcctttg 1520 cctttcgtgc cggcaacatg gattggattg aggcgattca ggtcagaagg ctatataaag 1080 agtgggagta gacaagttag caatcgcaag cattggaact gtgcaagata gactgcgaac 1140 ctggtatccg atgcgacgca gccattcgac ggtctcagga agcgaccgaa gattgagagc 1200 atgtctagtt tcaggtttgg tgaattcctt aactattgcg aattggactg cacgagttga 1260 gggcctgaat 1270

<210> 3331 <211> 791 <212> DNA <213> Aspergillus nidulans

<400> 3331

atgaattatt caaccettet gggcaacagt ettettgget taatcattge teateeggea 60 gtaaccttgt teetegeace etttgtgetg aactttetae tetagagtgt eeacetegea teegecacga gaceteecag ttaegegaat ttetaegeeg aaeggeeage eteagggeat ttctgtcgac attcaccgtg tatactatac attctggcat ttccgctcct attgcatqag 240 actgccggtg tagaaaagag cttgggaacc gctgtctaag acgtcccaat ttcaccaacc 300 acgttaaagc ctagatcatt gttccacggt aaagcttttt cacagcaccg tgttcgatgc 360 attaaagact ggaatttgtc agggcattga ccggaaaatt ggctgggcta gatgtgacgt tgtctatgag cctgcagact gggcatcttc gctctcccct acgccagttg tgcacttqct ttctgcaata tcatctcaat ggtaaagctg aaaggctcat aacgtggcct agtgtgctca 540 tgtgcacaag ccatgctcca gcaatcctga atccagcgaa ccagcatgca gcgtatacca gatagactca gtgactcaac gcggattgca agaccgcacc ggaggtatgt tcctgccctq 660 ccgttgagaa cttactgtat gactcaaggt tgttggagac ctatttacac tggcctaatg 720 tettatatte caegetgita etigiteece gettacagea etitaeteea taeatetaet 780 cttgcttgcg t 791

<210> 3332 <211> 1281 <212> DNA <213> Aspergillus nidulans <400>

3332

acgaacatta	cgaacctagt	cacggatatg	tggatattgg	tcctgccgct	gccgaccatc	60
ctgcggctgc	agctatccag	gagtaagaag	attcggctta	gtttgctatt	tacggtggga	120
ctggcgtaca	ttatacaccc	atatggaagt	ggatcgctga	ggctaatgaa	gtcagaacat	180
gcactgtcag	tgccgcgcgc	ctctcagttg	ttgtctcgca	gggctccaca	gactttacct	240
gtaaggctat	caccctcctg	acccttctgg	atgatcctta	catctcaggg	gccggcgtcc	300
ctctgggcat	cctctccgtc	tgggagcccc	taggcggaat	cctctgcgca	aacctgcctc	360
tctcgcacaa	gctcgtcttg	agcgcattcc	ggaaagtcac	tggccgcact	tcctctgagc	420
gtaaccatct	ttcaccaacc	gggccgcgca	gctggtatcg	cctcgagaat	tacctccacc	480
gaaaggcaaa	tcgaaatcta	gagactagta	çagatactta	ctatacaact,	cattcatata	540
cagattcgac	cgagatgggt	ggtatcgttg	tccaacggaa	ttttgagcag	gtttcctcgt	600
atacgggtgt	tgatttactg	cggcaagagg	aagagacagg	agtgccaggt	gagaatccag	660
ggacgcgatg	atatatcttt	tactccatat	actctccgct	cgattaccat	tggtatttcg	720
aaacgccgaa	gcatgtttca	gggaataaca	ggatcaacac	aattgaatca	gactgccaga	780
tataagagtc	cgagttgacc	caaaacgccc	taacagttac	atcgatgctt	acagggaaga	840
gaaactatga	gggtgcagga	ataaaggaag	accaagggtt	ttaggatgtg	aaagatgtat	900
taggtatgct	cggagtggtť	tcttaatatg	agggtgcatc	atccttgtca	tgactctaca	960
aaccgactcc	ctagtatctt	gcgtacagac	agctgagccc	taggtttcct	gacccgaccc	1020
tgccgcatca	gggctccctg	tgcttttgcc	taatcacatt	agttagggtc	tgaagttgag	1080
aattgaggcg	gcgacataac	ttgatcgctg	gtattgccaa	catgagacta	cggcacgggc	1140
gtagaagcgc	agattagtgc	aagacttaat	cgttgtaatc	cgcagctatc	gtaatctctc	1200
cagccaggac	cacgtactct	gtgcacacaa	gcccgagctc	gctcacttcc	aagcatgcgc	1260
tgaagtctaa	ggcccgcaag	a .	•			1281

<210>	3333
<211>	972
<212>	DNA
<213>	Aspergillus nidulans
<400>	3333

aaaggcaggc cacaaaggtg tggtggagtt gctgctgaaa cacccgaaaa ttgaggttga ctgggctctt gcggcggCgg Cgggtgagaa taataaggcg attgtgcgca tgttgctgaa taggaatgtg gtcaagtcta agcgtgaaat acagcgagct ttgctgttca cagaagaagc ccgactggat gaaatgcatg cctttctggt tccatacctg gagacaatgc ccgaagagtg 240 aacagagagt gattgttggt aggtttgtta tcattgccaa actctccatg gagcttatga atgaacgact tctataaata caaaatccat tccagctatg caaatataaa gcgcactaac ccatatcttg agtcaggatc gcagggtgat aagggcgatt caatggacag aaatcgttac 420 gagagccaga taaatatgga tggaaaatag acacaggaaa agaacaattt aagtctgcaa 480 aggggatgct cgcctgcgtt atgcaccagc acaatgtgga gtgttaaggt gaatgtgaaa cgagagtcac gattatattg agaaaaccca atagccaatt atgaagcttt agagttattg agagtgaaaa ctgtacgccc tgtctagagg cctagtttta actcatagct cgtaatgtcc 660 gtttggcaac cgtaggagta aatctgccca tttggttacc attcaatact ggtgataagc 720 ctcattggtc aactgaacgg cccatgtcat aacaagcaaa agccgaaata cataaaaaaa 780 agctcccaat gaggcatcgc aaggcgtcat caagctgcat tccgggcatg acattaaatt 840 gacgggtgta gcaaacgggc atattaaaat aggcccgtcc cgcctgctat gtttgcatga 900 tagataaaag cgacgcatcc gaagggtata aggatgcaag gaatacctcg gtgaatgttt ccatactatc ca 972

<210> 3334

<211> 729

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3334

aacgttatgt gccatgctca agcgtggtac tttccttcaa ttcacaacgg cgcaatgttc 60
atatctcatt tttctacggt tgactatttt gtggacatac ttatataatc aggcgaaaga 120
atcagctaaa cattcaactg aactcgtgca tctgaatcga cgatcacgaa acgccggaaa 180
gcacctaata cagcagacat ccgaccatac ctcgaataag caaagtaagc gtaataagca 240
agaatataga ctctaatccc aagcggctta aaagacacca gaccctttga ctccgctttc 300

agcacgcctc	atatcggaat	gcagcattaa	agcaaactga	gaacccaagc	actaatacat	360
gaataaacca	ggggtctaag	cacgcttccg	cagaacccgc	cgtccgcctg	ttgcagtctc	420
actacccgcc	ggcaccggtt	gctttcctag	atcctgagac	tgtagtcttc	ttcgctgcgg	480
ctgaagcttg	agaccgcgct	gtagactctt	cgttgcagcg	ctggcagcgg	gcgggggttt	540
attctccgcg	acagctagtt	ttggctactg	gtgtacctga	tgagccngaa	gatgaaacgc	600
tacctctgcg	atcggttgcc	gagacaagtc	gtgacagggc	agcggaagaa	ttcggcctgc	660
cgggcggcct	gttgcagact	ttggttggaa	aaagtggccg	gcggaaagcc	ttttgatagc	720
ctgcagacc						729
<210> <211> <212> <213>	3335 603 DNA Aspergillus	s nidulans				
<400>	3335					
cccatccagc	agtctatata	agatgctata	ttcaccacct	gttcaattcc	tcatcacgct	60
	gactttcata					120
ccaaaaaaac	caacttccac	ctcttcacaa	tgaagttctc	cattgctgcc	gctgtcgttg	180
ctttcgccgc	ctccgtcgcg	gccctccctc	ctgcccatga	ttcccagttc	gctggcaatg	240
gtgttggcaa	caagggcaac	agcaacgtca	agttccctgt	ccccgaaaac	gtgaccgtca	300
agcaggcctc	cgacaagtgc	ggtgaccagg	cccagctctc	ttgctgcaac	aaggccacgt	360
acgccggtga	caccacaacc	gttgatgagg	gtcttctgtc	tggtgccctc	agcggcctca	420
tcggcgccgg	gtctggtgcc	gaaggtcttg	gtctcttcga	tcagtgctcc	aagcttgatg	480
ttgctggtca	gttcttcgaa	aatcactttc	gtgatgcccc	aatgctaaca	attaccagtc	540
ctcattggca	tccaagatct	tgtcaaccag	aagtgcaagc	aaaacattgc	ctgctgccag	600
aac						603
<210> <211> <212> <213> <400>	3336 5618 DNA Aspergillus	s nidulans				

ttttttttgt tctggggcgg atcaatctcg aaggatcgta gatgccggtt tttattctct 60 ttttgtagtg cgagggagct gttgataccg acgaaggtga ctatagaggt gtcgtttgat tgtgcggcag ccagagaagt caccgagtcc tcatcccttg aaagctcgac gtcgacaacc 180 tegettagtt egtggegttt gaaageattg agaaggaeet geateeattg ttattataeg 240 cetttgagaa eggagatgea gagttggteg tttacaatet tgtteeceae geegettegg 300 cetteteege egtegeegge aacaagaaga aaggeaggat tgegegggte gaagteggea 360 gcgaacaaag gacatgagag tgtgatcttc gcagacggta ttttgggcgc catattaaga 420 accacctgca agcccagggg tgtgacaact aattgcttga cgaccgtaga ttgaatgagg 480 agtgaagatg aagattaagc caagttggcg aatgatggtt ggaatgacgt tgcggcctgg 540 agaacttggc atccaccgct gggtaataat ccgtgtaatc cgtgtagacc tctacqaatq acctacaaac tggtaaagct gatgacagtg aaagagattg gtctcttcta ttttagccag 660 aattattgaa tetaateeae eteetggeea gtaaaeteag gtaategett eeggaeatee 720 teccaggtet etteteette taccagagae ttgagageet geagaatete tteetggete 780 gcgcgcacct gctttgtgga gtcgcggtca cgcagcgtga tagtattgtc cttgacagac 840 tgaaagtcta cggtgacacc aaacggtgtt ccgagctcgt cgttgcgtgc gtatcgctta 900 ccaatgctgg cggaggaatc atcgacacgg ctggagacgc ccaaccgtcg aagtttggtc gtcagttctt ggaccatagg gcggaaggcg ggattgctcg ataagggtac gaggagaact 1020 ttagtaggag cgatcacggg agggaacgaa agaacctaaa tgatgtgtaa gaaaagggag 1080 tgaactcgca aaagggtttg agatacttac gccacgcgct tcgtcgcctt cacggtagta 1140 gtagacatgt tccataagac tgtatagaat acggccaata ccgaatgatg gctcaattac 1200 gttcggggtg tattcccgaa cattctcaac acgggtgcgc ttctcaatcg tgatgatatc 1260 tttttctaat tcaaccttgc cggaagcgac accctcgaca tcaacctcaa tcttgccagt 1320 cttttcgagg tcaagagcca gcttctcccg aagctcctga gacaaagcat caatggcagc 1380 ctcaacggtc ttgccatctt tcttgaagcg aggaccgaac ttcttcttgt ccagctcaat 1440 ttgccattcc tcgaccttca atggctctgc gcgagtctcc cgaacgacca gaggggcacc 1500 agtettgtte ttgtgeacat taaggteata tgegetgegg tetgeacage caacacte 1560 aatccagccg taactagtgt atagctcagc atcccagcag tcgcatgcat agtgggccat 1620

ctcgttggcc atgtgttggc ggaagcggag cttggtgggg tcaacaccga gcttgagcag 1680 gaacaactgg atacgggcga ggaagtatcc aagagtctcg ttatccacca atcctgtctc 1740 aacagccttt ccgacagtca tccgttcagt cttggtgctt ccggacagct gcacgtctcg 1800 gttaagcagc gtcaactcaa tatttttgac ctcctcgaaa cgcgcatgct tcttgccacc 1860 ttcggggtcg acaaaatgct caatctcagc catcagaaat tctcggacac gcaaaagacc 1920 tgcccgaggc gagatctcgt ttcgaaacga cttgccgata gacgctgaag cgaaaggcat 1980 tgcctgttga ttgaattcga gcagtttctg gaagttcaag aactgtccct gggcggtctc 2040 aggacgcagg taaccaggca tattgctgct aggtccaaat aaagtctgga acatcaggtt 2100 gaaagcaacc ggggggagga ggttgccacc ggtaacaggg tttctgatgt cgtatttggc 2160 aataatttgt tecaattgag gteegtegaa gttgtegate tgegeeagaa teteeteata 2220 ttccttgacg actgcatcat ccaacttgac agcaacactc ttggccttct tcttttctt 2280 egectetttt tetgeateaa eetegaeett etggeeaega geeteettgt caecettgag 2340 acgagetteg aggaetteet ceaceaaatg atetgegegg aagatetete eagtettggg 2400 gtccttgcac atccaatcgg cgaacttatc gacgtggccg ctagtcttga gaacttcctc 2460 eggggteage attgtgeagt egacetegag catatectee tecagaacaa agtgetteeg 2520 ccatgtctcg acaatgttgt ttaggacggc gcaaccgggc ggaccatagt cgtagagacc 2580 agagacgcct ccatagattt cgaaggaggg ggtatagaat aggcggcggc ggacgatgga 2640 atccaagacg gaccggtcaa cgacctgacc ggtcttggta gttaatgtag ccattatggg 2700 ttttgtcttg ctggactcct ggataatggc gcgaagggca ggaggggtgg tggaaaagtg 2760 tettetgttg geggggttee ageaggaaat gatteggegg ggaagaaaag aaaagegaat 2820 cggagattga gtcatccgct gacacgtgag ccgttccttg atcaccaagg gggcgatccg 2880 gccaaaaaag atcggattgg aaatcgaata gaccgaaaat aaacagatgc agagcaattt 2940 aaagaagcac cagaaagacg tgctctgtgc tcgcctttta aaaagaaatt aagatatttg 3000 aagetteeag geeagtaaac egagteettg caaaacagaa aaactgeegt attattgact 3060 gtacggttga ttgactacgg gggcttaccg ccggtcaaat gtttctccac aaaaaattat 3120 ctccgctcca aaagtctgga cggattgaag cttcagtaac accaccaagt atacgtctat 3180 aacccaacat ggtctccaag aaagcgtcgg cgaggcctcc ctcaggcata attggcgact 3240

tcaaggttcg caataagcag aagcgtcaac ttcttcacat caaacgaaag cgcgccaaag 3300 atgcggctcg ccgggctcag agattcagca cgaagaagga agaggctaaa aatcctaagt 3360 taaaggagga acgacttaag cgaaacattc ccttgacctt ggagcggaag cgtgtatggg 3420 atgatgccgg cagcgacgtt gaggaaccct tagggctgag tgtcgatgtc gagcggataa 3480 agagactgaa gcaagaggaa gatgaagaac tcaatcgccc gttggattcg ggctcagagg 3540 ategecaeag tgaggataat ggtagtgaeg aggaagatga egaggaegat etegaeagea 3600 tgttagctag tagcgacgaa gaagacgaag gcgacgaggg taaagagagc aaaaaggaca 3660 geogeggeeg caaacettee getatteeet cageaacgga acgtgcaaca ageceateee 3720 aatcaacaaa aagcacgaat ttgaatttag ctccggaagc gctcgctgcg aaattcccat 3780 ctctcttctc tccagactcg caacgacctc cgaaaatcct tattacaaca tccctcaact 3840 caaccettca ccacgaagee gaaateetta etcaactett ceccaacage gtetacatte 3900 ggcgtacggc gcacgccacg cccacaaatt ttccatccgc gagatcgcca aattcgcctc 3960 caaccgcgaa tacaccacgt taatcatcct acaggaggac tcgaaaaaagc cggccggcct 4020 ggacatcgtc caccttccga agggccccat gttccacttc agcatcagca actgggtcga 4080 aggcaagaag atacccggcc acggaaagcc aaccgaacat tggccagagc ttatcctgaa 4140 taatttccgc acaccgctcg gtcttctcac cgcacatctc tttcgcacgt tattcccgcc 4200 acagccggat atcgagggcc gacaggtcgt cactctccac aaccaacgtg actacatatt 4260 tgtgcgtcgg caccgctacg tgttccgcga gaagcgggaa actgaaaagg ccgttgtggg 4320 tgcggacggg aaggagatta agggggcgga ggggatccgg acgggtctcc aggagctggg 4380 ccctcggttc acattgaagc tgcgccgtgt tgacaaaggt atccagaggg cgagtggaca 4440 ggagtgggaa tggaaaggga agatggagaa gaagaggact ttgttccagt tgtgattgca 4500 caatgcgctt tttgtggttt gcattgcatg gagttttggt tcgtaaaaga agtctgggct 4560 tgattttaag gttatgcaaa taccacttcg actgtctata gatcaatttg atgagatata 4620 tcacaacctg agetegaaac ttgegagege ggttttaagg agattgeteg tttteggett 4680 tagacacttg ggccaggtac ttctcctaac ataaacatcc caagcagcag gacgctttgc 4740 atctactatg ccataacaac atgaaagcaa atggggtata atagcataaa ccgactattg 4800 . teggeacaaa ecacettaag teaagetega atecaaatte ateteattat egatetgttt 4860

cagettetet ageaacteat teettegeaa atgegeeete gagaaeggtt tgegtgetgt 4920 cactgttttt acacaggctg taattttctc cgcagctagg atttcaattt tcaccttggc 4980 gcagagatca cgcactcctt cctccgtcca attccccgtc gcggtgagag gacgcagact 5040 ataagcctcc aagccttcga ggagcgctat aagagccatc ttccctaggg ttttctcacg 5100 eggateattg gtecaggtee egactgggat tgtacgttet atgactegga egteaaegaa 5160 tcccgctgca gttaggacgc tggggaggag atggcataga tcgcgcggat agcctgtggt 5220 tccagcggca gagcgcatag cagacgttaa ggtgttaagg taggaatctt ccgaattcgg 5280 gaaggagact gtatccgctg ctgggtctgc gtcgctgacc tcaatatatc cacctggaac 5340 taaatggcgg aatgcctgcc tatagatgga ggaccaatct gagaaggcgc ccgcgaggcc 5400 gcggagatgg atcaggtcga atggctcatg gtaggtccat tcgttccggg cgtcatcqaq 5460 ctggaaactc acattgggga gatcgatagt gctgccgagg ctgttgtcaa agacgcctat 5520 gtcggttgca acgatggtgg cgctagggta ggcggcgctc atctcaatgg cccagtcgcc 5580 tggccctgta ccaatgtcca ggatgcgagc tgtttgtt 5618

<210> 3337 <211> 774 <212> DNA

<213> Aspergillus nidulans

<400> 3337

agtttgtcct ctaggccctg gccctaaccc tggattcacc gcgccgtcgg acgacttcgc 60 ctgtgatget teacgetett ttegtttett tteaacetee gtageegeaa gttetegete 120 cttcttggcc aaaaacggat ccgcctcata cagccagccg tctcccttct tgaactctgc 180 cgcctttagc tcttcaaagt cgctcttcca aagctttttg aagtttggtg ggagcatcat 240 gtgtagattg gttttgttgc acacatggaa gagcgcaaat gtcgcagcat aatgacgagc 300 ttccagcgcc cgttggctgc ttaaaactgg ctggcaaccg tatgcgaggg agtgtaatcg 360 tttctctagt cttggagtcg atgcgtttca agataacgga tgagacaaac cctccgtcaa 420 ctttgtccta tagcgtgcaa tagttagtac tgaatcagca ccacaatgcg cgcatgatta 480 tttcctgttc aagctctcac catagtatat tcaggcttct cccatttatg tttctggcaa 540 tgttctgaca tcaaattgac cggcaatttc cccgtccatg atgcgccacc aatgacctgc

ttgactgtag	gcttcttttg	ctcgtccgct	ggttgttgcg	ctttcttcgc	gctctccgct	660
gtccgctcag	cggcagcttt	tgcctgcttt	gtcccaggct	tgggcacgcc	tccacgggcg	720
tcagacttct	tcttgggcgg	catttcaggt	ggttactatc	cttgacaaag	acgc	774
<210> <211> <212> <213>	3338 1461 DNA Aspergillu	s nidulans				
<400>	3338					
tctatgcggg	aagaccgctc	caatactgcc	agtgaccaca	atgcgaccgc	caggtcgagg	60
attatgtctc	atgaagtgag	tcgccaattg	agtgccgtag	attactccct	tatagttgat	120
gtccacgaca	tccaactcgg	gggccggagg	aatgtcatca	acgctcctgt	tcttccagtc	180
gtatatatag	acggacgaag	tatcgacaat	gcccgcattg	gcgcatagtg	catcgatacg	240
gccccagagc	ttgcgaactt	ggcggaagac	attcgcgtac	tcatcgtact	tggatacgtc	300
cgcagggaaa	aaccgggcat	taccgtcagg	gatcgtctgc	agaagagtct	gcccaggttc	360
acgatgtcgg	cctatacagg	caatcttcca	tccacgcgcg	gctagatccc	gggcaagatc	420
ggctccaatg	ccagactaca	aatacgaaca	ggttagtggg	agctcgacaa	gccccaggct	480
cttggtgtac	tcactgtggc	tccagcaata	atggcaacac	gatcttctcc	atgtgaattc	540
atcctttaat	gtacggcggt	acgcacttgg	tattcagtaa	gcgggattgg	gattgatgta	600
acctgtagaa	tgttttttc	aacgcgaaac	ggccagcctt	ctgagttacg	tgtgtacaaa	660
aacgtaatct	aactgcttgg	agtaatagta	aggtcgctga	tgcaggatcc	agccgatgtg	720
gatcagcatc	aacgtgtctg	gtccatcact	gactcgctat	ttcttcccac	gtaaagggtc	780
gagcacaata	acttgggctg	tattcgaatc	gcagctggtt	ctggtaacga	gcccgtctac	840
tctgtctact	ccatttcctg	agtttgctta	tcatctttcc	ttctaattgc	agctttcaat	900
ctaattcctg	ttgagcgccg	tgctgtgccg	tgccggcccc	agcttaacga	atctacctcg	960
ctcttagatt	cagccactcc	aaatctaacc	gtggagtcgt	tcgatttttg	cgccgcctca	1020
gtatgtactc	tatataagac	ataaactaaa	ccgtgtccag	gctcacagaa	cggtatgtca	1080
aactcccgac	gtacaaaggc	ccagtagctg	caacacgagc	tggtgacaac	aatgattgat	1140
tcatattcat	caacgagtgg	acgttaggtt	aactgcaggc	agacttcctc	taaagaggtc	1200

aatatactgc aacaccatca tacgccgcaa ggtgataggt gtcagcatcg gttccatctc 1260 ggtacaagtc tagggaggct gaacaaaaaa accttttcac ccttttatt ctttttactt 1320 ttggtttgac ggtatattgc gtattatagt ttacgaagag ccgccttatt tctgactggt 1380 aacgtgctgc atgaatacat gcagttcctt accggtctag acaagcagcc aatgcggaac 1440 gagccgccc gaattgacgg g 1461

<210> 3339 <211> 1204 <212> DNA <213> Aspergillus nidulans

<400> 3339

ctggccgcgc gacacgaaaa caaatacagc gcagacaccg catcagcaac atctacacgc 60 taaaatccct gcgagaccat tttcttccca tagccgccta tagccgccta agaccaaaac 120 aattcgtctg tgctcgtgcc cagttgttcc gtccaggaga tgccgtcatg gtgcgataac 180 gtcatggccc actgacctgt cccgaaccag gagcgatccg ctataccaga acgggcccgg ttgagggaac ctcgtcattc gagtcgagtg gaaacagtct gaatatataa atttactctt 300 tgtcaaccgc aactcgctga aacaaaaccc ctttgagaag gttgagtggg cggccgagaa 360 tctaccattg cggcctgagt cacccgatga agaagcatca atcacaaccc aagtcttttg 420 atccactctc gagccaggga cttcgatagt cgccgttcct gtgtctagtt cattccagtc cagttagttc gtacgtcgct gtctagacca ataccaactt catcacgcca atagcttcac tgccaccctg agccacccac ggcagcttcg acaactgcct cagcatcatg cctgggctct 600 ccaageteaa gaagegtett getgeaatea aggaggaatg gggteeeeta atggeegeea 660 aagaggaggg tgatgaggtg tacaatttcc cggctggagg tgggcctagg cctggtcaga acaggtaggc cttctttctc gttgtcatgg catgtctcta gctgatcttg agcgcagttc 780 gaaccaaacg ccctcacaga aggagaaaca gcccgagtct accgattcgg atgggcgaac 840 gagtgaacga gcgcgacgta gcccagatct tgatgctata gccgaatagt gatcgaagag 900 ctaatagtta tetgtgetet actegattgg attttgteet gttgttgaac eteceettte tgcttaactc tgcttcgact cttagtcctg tatactacca agtttctttt cctctgtctc 1020 gatecteget ettecateat gteggattte aageeggtte gatetteagt aetgettggg 1080

aatcettggt taaacteett ggttggeage atteeaacte aattegeaag gtattaceae 1140 caggetetaa etgagatgat eggegagega gtgateetea ateaatteet tettggagae 1200 cage

<210> 3340 <211> 1327 <212> DNA <213> Aspergillus nidulans

<400> . 3340

tgtttcccgg agggatctgc caagtgaaaa aggggacgga ggtgaatttt gaaaaccctc 60 catgttttcc tggagtttca atgggaatgt gtatagtaga aaaccgttgg tcatccagaa 120 ttaagggccc aaacggatct taggcctttg gtcaacagtc tggctcggac aaagtctcca 180 ccccttcggg aaacccaata aaagatgtcc atcccaaact cccagccaag ggaagattca 240 gtttcaattc caaaggttaa agttttaatg ctacgggcaa tgaaccccgc gaagggacct 300 atttaaacca aaatcaccaa ctgtttagcc ggtgtctgtc aggcaaggga agcatgtaat 360 gtcaaaactc acgtaatcgc catcacagtg ctcaatgtga gcaatgtgaa aagtccctcc atggtctgcc gttcgtcccg tagctcgttt tctctctaaa agactcggga catcgtgtcg 480 ategegggta tetgtaegga eagateagtt tagtgettga eeagteagga gteaageagt 540 gcagtaggtg tggtctgcgt atcccatgta gagccaggaa cgagctcgac ttgggactga 600 caatgccgga aacgtggcgt cggcgaacgg gatccgcagc gggaaaaaaag gccgccacca 660 ggtacgtaca caatagagag ccagcaatat acagcgcgat tgggaaaaga gagccggact 720 tetttatgtg tattgtggaa gaattgggte atataaegga gettgtetgg etgatgattt 780 cttctaggca cggcgatttt gcttttggtt gagttggtat taataactct gtcatatcgg ccctaccccg attgccgccg ctgtaagaac cctacgtttt ccaaggcgag tagctggcat 900 ggacccaatg catatggctg gaaagctgtt catttaatct agagtcatgc taacgcagct ctgcttctat gggctaatca tctggcaagc aattggcgat aaataataaa aaaaaatggt 1020 tgatcaagtc aataactctg tgtctgcacc ttcaggaatt cacggagtcg ttcttccttc 1080 tecegaegag titettetga tgicaaagtg ceatataett egietgietg tegaaceaet 1140 ttetetttga etteageeae acteaettgg eccaageeat eccatacete ttgeatggtg 1200

cottoctagtt tatcocaaaa tgcacgaatg ccaccgaccc ccccaccttg ttggtaactc 1260
tcgaaaatac cattcccggc ccatctcggt cccaaactgg ccatgaggat agtatcgaga 1320
tccttag 1327

<210> 3341 <211> 1101 <212> DNA <213> Aspergillus nidulans

<400> 3341

atcagacgaa atgactccca agtgactagc cgtgcatccc tcatgcatcg cacgatctcc 60 acaaagaagc gcttgacatc gatccatgac ctcgtccaac tcgaacaact ctgttaggtc tgaactgcca tgggtaactc actcggtcct tcttctctgt tggttgcatg catggtgctg 180 tgtactctca ataggactgt gtatgtcgta ctcagtctct cttcgctctc gtactcggca 240 acccagggcc ttttgtgcct cacaatcaca tgaccaaagg ctaaatacct gtttaacggc 300 aataatggca tccagcattc ttcgagtcga cggggaaagc gtcatagacg ataatggaaa 360 cgaggtcatc cggcgcggac gctggaagta gtattatgcc ctatcctact tctgaaaacc 420 tetttetgea geagactaaa ettaceagtg eggacaatea tgecactace aetgeactet 480 tttatacctg acttactttc tgcaagatgt aaaagcaaca acgctcgagt ccaaatgggt 540 acccccaagg agcgagtcag acggttacgt tggcggcaac gaaaagcatt tgcaattgaa 600 ggaagaaaag aggccactgg tatttgtcgt tgctgtagat cttaatgtag atggaggact gaaggttccc tcattaactc tgaaacgact tgatggctaa cgaactagga atatagttgg 720 gcatgtgcgt gtatgttccg ctggcttagc gcccgctgac tggctaactg ctgccttatc 780 gataaggccg cccaaaaaaa aagttggagc ggaaaaagat ggcggggtta atcggatgag aatcgcctgg tgcagtcgct cattctgaat ccgtcgcttg tctatggtca ttcttgtttc 900 agcactctcg gtaaatatat ctgtattgcc ctgttctttg ggtatccggt atgactcggt gattacatcg cgtgataatt caacgctcta acactcttct gggtccctct ctgcaacggt 1020 aagtgctcat ctacctgtgg tgctctgtac tagtatacgt tcctttactg accatgtaaa 1080 gatcgctagg ctgaaaacca t 1101

<210> 3342

<211>	725		•			
<212>	DNA					
<213>	Aspergillus	e nidulane				
(213)	Aspergrirus	s illudialis				
<400>	3342					
cccaaacacg	ggaaggggtt	attcggaata	ttggggcctt	aacaacccaa	ggggtcaagg	60
ggagggccca	gcgggggtcc	ccttcaaaat	ataggagccg	aaaggtaagt	ggcccgagtt	120
ttttctaact	teggeagetg	gcatttattt	atggtctata	aggtctataa	aaggaacatc	180
tatatttcca	gacacgccac	tagagacaaa	tagtccacct	gcagatagcg	cagactcaat	240
cgcgccccu	gacacgccac	-999999cgug	cugocoucoc	geagaeageg	cgggcccagc	240
gcatcccccg	gctcaatcaa	tgtctgatga	acatttgact	gggaaatatc	ccctaacgtc	300
ataggaaata	taccttcaat	ataaacagtc	atggctacac	cttcggcgat	cccagcaatc	360
agtcagttcc	cgcgatgccc	caaaagagcc	atcttcagcc	gctgactcaa	ctgccgactg	420
ataannaata						400
CLCCaagete	ceegeteeea	aattecaget	ecatatecae	gacctccgtc	accetgeete	480
tcaattcttc	cttacttcca	tecetgatet	cacatctacc	cttgaaaccg	ccctttccac	540
	occuococu	cooccigacoc	cgcacccacc	cccguauccg	cccccccgc	340
catcatccag	aatctctaca	gctctccaaa	gtcggggagg	gcgataaatg	gggccaccgc	600
gacgaactcc	aggaaccgaa	agcacttaca	aacattcaga	ccttctgtcc	cgccaacccg	660
ctcggtcaca	gtcctcctac	gcgatattgg	aggcgttgct	tacacaactg	gcaaggacct	720
99393						725
cgaca						725
<210>	3343			•		
<211>	1459					•
<212>	DNA					
<213>	Aspergillus	s nidulans				
<400>	3343					
tataattaa						60
tatacttaac	aaactgctca	acaaactggc	agggatteet	ttggacctcg	catatectgt	60
cacttataat	tcaacgattt	catagteteg	agcgctcagg	ctcctttaga	taagettgea	120
ogecegedae	ccaacgaccc	catagetteg	agegeeeagg	ccccccaga	·	120
ttactttcac	aattcctttt	tttctcgcta	tgatgcaccg	cggaggacac	acattttgta	180
			3	33 33	J	
gctagttgca	cttattggct	ttcccaatca	gcaagagtcc	gttcattttc	ctttagacga	240
cgaatcagct	cttggcaaac	atctgcgtgt	tgttgtttga	tggaatcaat	ttgttgtttg	300
catageettg	tgcgttcaat	ttgtgctttg	aagagttggt	cgaggacgct	atggcattgt	360
tttctataac	cattcaacac	ctcatttact	ataactttct	cgctctcaat	ttgaggaaat	420
ccccacac	cacccaayac	cicalliall	gragarretet	cyclicicaat	ccyacyadac	420

aggtactgca gagttattag tggatactaa agcacaatta tttccattgc ctacctcatt 480 gttattgcgc agcgtcctct ccattcctac gcggagctcc tgcagagttg gttgccaaga 540 tatctgacca gcagtgcttt ttgacagttc aaacgccaca ttctgctctg gttcagcagc 600 cgctgcttaa ccatatagtc caagaacgcg ttcttgaatt tgatgctgtt cttcttgccg 660 tgacccaggc gaaacggacg ccacaacttt caagaggtgc cgttcgcctg cactcacctg 720 cgggtggctt gcgcagggtt ggtggcccat ttcctctgta agagtggtcc gtgatgcgct 780 gaaatctgtg tcagattctc tcggggccag ctgaaaagtg cagggggttt cgcttgtctg attctccgtt gtgtgatagg tggtggtgtt gtaaagttct cacattcttt tgcttttttg ttegatetet accetatttt tgetetttte tgeetattat attettettg tattattttg 960 ttgagatttt aatcetteta gaetteatta ttetatttat ettgttttae aettaatgat 1020 attteettte tetgittaat tattattaea ettatetett teettittaa titteetteat 1080 gtattaatat cttttccttt cattttttc tgtaacttaa ttcctactgt tttcctgttt 1140 tatccttatt tgtatctttc tgtttctttg cctatttttg tgatattatt actatatcac 1200 ggttgttact ctctaacttc ttttttctct catcctttta tttattctta ttccctttct 1260 tatttcatct attttcttag tcattcttct tctacatatt cattcttctt tactactctt 1320 gaatattttt tettacaaat etaegetttt gtgtaattet attgttteta atatteteta 1380 ttttttctca atttgcaatt catttccttc tattatatat ctgtcttttc acttcttcct 1440 catctacttc tctcttccc 1459

<210> 3344

<211> 1527

<212> DNA

<213> Aspergillus nidulans

<400> 3344

tecaecactt taagaeggat teaetgaete gaetgetgee agtegaeaa gtegetgate 60
tgagtacate gteggeacta tettgtgate getteteea atgeeegteg eegggaacae 120
ategateage gtgeegaaga etegateega ggatggatee tggaatgeag tatetgaeae 180
caecagaatg geegeettea ategetegte egecatttee etegetett tgaaaatgag 240
tgtaaaaaaga gttggagaag gateeeaaga aagtaggagg gggatgteeg gagtegeatt 300

attecgetee gaccecteat tgacacetea ggcacaaaat ttetgtaagt tettteeteg acaaccatca cgaaaaacat ccattaacgg accgatcaca ccaattgtga caatgcgagt 420 tccttccccc gagcagagtc ttcttcaatt ccttcgtaca gcacttcagg ttcatcaccg 480 cttcgtttcc ggttcgctgt ctcgtgcgga gtcccccatc tacgtcatcg gcaatccctc 540 cgccgacctc gattcaatcg tctcagccct cgtgtactcg tactttgcca acaatcgtgt 600 tecaegegae tacceaegee ettatgtgee tgtgattaae etteataatg tttetegegg 660 gcccgaactt ggcaggttac gccctgaatt cttgattgca ctgcaactat ctagatccga 720 tgcgggggac actgtggaga gctcgcctct tgaagaacac tttctgactg tggcggactt 780 tgcgaaccaa gtgaaggaac gacgtgttgc aacctaatta caagctgatt ctgtcctggt agactggaac gcgttgccgg tgcgaactta ggacacccgc taggtgaatg gatccctacc tagcctgcca gtagagttaa ctgtcctagg ctgcattgac caccatgcag actaggggtt agtecetect atagatagea eccageetag ectgategeg aegaceggtt catgtacttg 1020 actcgtggtc accgagctcg agaaaatggg cctttggcac aaaatcgctg aaatgccccc 1080 aaatgaacaa gttgtggcga aacttgtgat gggcccaatc cttaatgaca cggccaatct 1140 aaagccaaga caatgtgact aattggatat ttggttagca ttactttttc caaagcaacc 1200 ccaccgatgc ctgatgggag ttattgattt tatcgtgagt taagatccaa tgtgattgct 1260 tttattgcta ccctggagaa ttttaggcgg ctacaaactg ggcgtgaatt acagtgacct 1320 ataaatcggt ctattgatat gtctctgata gcatcctgtt tctaatgtag cttttaccct 1380 tatgttgctg atattcctta atcttgtgga ttgttctatc ttccaattta tggtttttct 1440 attituting cittatagia cittitigiat citatcitia teactititi ggettititi 1500 tttatctatt ttcatatttt tttttgt 1527 <210> 3345

<211> 637

<212> DNA

<213> Aspergillus nidulans

<400> 3345

ccaaatgcat gttatggttg gggttaatgt gcactcttgg cgtaacgtcc tagattgcac 60 tcggatatca agtttagact cctagtagtc gtttgatgta ctaggggcgc tacatagtgt 120

cacttgtatc	gagtaaccgt	aagtccaatt	cattctgcta	gcaaatgttc	ttattctatt	180
gagttataca	atgcttattt	gaatcccata	tttcggtcgg	tttttcaatc	tgcaaaattt	240
aacaaaatca	ttccgatagc	tgtttgacta	tgtaaatata	taaatatata	tttatataac	300
gacggactca	atttggaaaa	tctgtgtagg	attgctcgca	ttgatcgtcg	tatagcagta	360
gatgtcattt	cagctattcc	ttttttctt	tcttaatttt	aatttcagca	acaatgctgc	420
actgatggct	cgtgctagac	gtacagaatc	aacctcttac	tcgtggtggg	catagcgctt	480
cttggcatct	tctagcccca	actgactcaa	agcatcttgc	ggttttaatt	ccttccgcac	540
cttccgcaag	ccactgactt	tcgaacgact	cgttcggaag	ttttgcaatc	gcttacgttg	600
cttcacggaa	tagaaagtta	cgctcggaaa	tgcaaga			637
<210> <211> <212> <213>	3346 492 DNA Aspergillus	s nidulans				
<400>	3346					
cctcttatgg	ccaccagccc	atgcgcttgt	agctctcgac	catgtctctt	ctctgtcggg	60
gccgaagttc	ctggttggtt	tccaaccggt	ggttgtctcg	aataatgtac	catcaagtga	120
catatcctgg	tcttggagta	catccctctc	gataaaagga	ctaatcggcc	ctggacgtgt	180
aatgcctttc	tcttcaatca	ggtctgacca	gccctgtaat	gacacctcgt	tcatatcgtc	240
aaccacgtca	tccaggttca	actttgcgaa	ctgggacgcc	agggaaccta	ggaatgagca	300
tttcagaccg	aacacctcag	taagagcatc	agccacatgt	tgctggcgag	tatcgttgtg	360
atcaacaacg	ttgaacagaa	taggggcgga	gccatcagtg	ggagcactgt	atctccattc	420
cgcagctttc	cacaaagcgc	tggcggcatc	cttgacgtag.	agggtattgg	tcttcaggtc	480
cttggagtaa	ag					492
<210> <211> <212> <213>	3347 4640 DNA Aspergillus	nidulans				
<400>	3347					
cattttgaat	ccaatcagcc	tctctttcag	actctcctgg	cctctgttca	atttcgtacg	60

ttgattgacc agacttggaa agaagttaat gatcgggtat ggcgaaacgg atcctggagg acaacaatgt cccccggcat ttctcagcaa attccgtctt cacggcaagc cgtccaaatt 180 tgaaagagct tacgatacaa tggctaatcc gaggttcgtc tctaggccgt cttccagctc cgagctccgc acccctgctg cgatcgggct gggaagtatc cggttgacct ggctggcttc 300 360 aggtgaggcg acgtgttcga gaattgaact atcgagtgct aggaaacaac ctgccctgcg gccgtcgaga acatagagcc tttgaagttc aaggggccgc aagctacctc ttacctcact 420 gaataggett atagtgtact ttccgcaaat tttgcctgcc ggtgcgatcc tcgacgaget 480 cttacagagt aatctctaca tcagatggct tttctggaat attgcaggtt gaatacatct 540 ctgattttgt ggtcattgtt atacctaatt ctctggaggt aggcaccttc gtcccattga 600 caatggcaca accectegae tatgactgtt atgeggggte ageagetget ggeagaetgt 660 tttaagagca ttatatgaat acaaggaagg aaatcgatta acaacgtttg tactgttctg ctcgcggagc agatctcctc tggacgcgac gggtcgatag tcaagaatgt tcggtaagct 780 tacagctatg ttaacaacca tgagaatcgt cgaacatgga cggacatgga cggacataga 840 cgagaaaggt gatactaaac ccacggatag caacaacagg aaggtgacag aggccacaga aaggtttgtt atctgagaat gagcggagtt tttcggtaag ctttgagttc agaatctgtc cggtgtccga tggcaaagct aacttgtaca aagtgtctgt cttttctgtc gggagagtcg 1020 aggetgtaca aetttageta gegagattae gegetgttgg aettettet etgggaeate 1080 ccactgctgc tggggggtta aggggttcca cacctttaat acgacgaccc accctgccgc 1140 aagagttaaa aatggtctca taccgatcac tatgaaacgt agcctgcagc agcctatgcg 1200 ctcgatcaat gttacgataa tagtcgggca aatagcccta acagccgggg atcatgacta 1260 aaagacgtcg gattattggc tcaacaaatg agccccaaaa tacctccgtt gcagcttggc 1320 tccgatgcaa tcagcaggct atcaagtagg tctttcgtcc tctcgtttgt tctaaaacct 1380 accttggcct cggtagacga agcagtactc tgtaatccgt agaagcacgc accggcccac 1440 tgactccaca gcggctcaaa agcagcaccg ggcttggcag agggtcctcg ccggcttaat 1500 ttetteacce tecageaett tetataceea teceggttat gtaceeatat eegttaceee 1560 gtacacattg attacaagaa acaacaatat ggctcccttg ccaccagaca tcatggcaac 1620 ccaactetca acaatatate tactagetge catgtteece teteegggeg aactegaact 1680

cgacgcgtca acaaaggaat gcatcgacaa agtgcgagaa tggtgcgaaa gcgaagatac 1740 atccgcagct gcaagtccat ccgctatccc atcaagcatt ctcctcgcag tgcacgcccc 1800 gctctcaaac acaaatggga agactattca ggttaacgtc tccatccctc tgcattccca 1860 ggacagccgg acggcagatg aagcacccac aataacatat tcccttcggc aaccagactg 1920 gatgtcgaaa gcagaggtgg caaaactggc ctctggaatg cccgctggtg acgtctttgc 1980 ggcgttggag tttattcaag aagctactgc gttcctgggg gatctgaacg caacctcaat 2040 ttgtgaaaac ccctcaattc ccactcagag tatcagggag ccactcgttc gcgtctggtt 2100 ctacttcccc tctctctcaa cgcgcgcgaa acgcgccgat atggtcaatt atgcgccgga 2160 ctacgggcta acgggcttcg ttcttgccgg gaaaccgggc gttttatgtc tggagggtgc 2220 gtcgaaggat attgattcgt atatgagctt tatcaagacg cactcgtqqq qqqacattcc 2280 tgcgcatcag aagaaggtta gcgagcggtt tcgagagacg gtgagcgttq agagagtatt 2340 tgcgggcatg gaggagatca cggacagcct gggggaacgg ggtgggcaga gggcgaaccg 2400 cggggatatg caggcattgg aggcttggct tgggaggaga gggctgggag aggcttttga 2460 aaaggtaatt tittaggtig gagettaigg titaigeage aeggaigagg teitgggaga 2520 tetttgtaaa gaatatetga agegageeaa aaaetatteg tatagaaeaa ageetgtett 2580 atatagttac aacaagttca cccatgatat ccatcatagc agtcagtaaa aaggcaggtc 2640 atcccggtcc aacaacccca cgatattctg gctgaaagag aaccagtctc ccagattgaa 2700 cccatccacc gcatcaatgg ttccatcacc gaagtttgca ccagggctgc tagtatcagc 2760 ttctaatgat gacatgcgct tgttgggtat gcgacctgag attccagcgg gtagctgaga 2820 ctgtacaccg aaggegeaga getgegeate cacetecate etgageetee getgeteete 2880 actegagett getgttgaca tgatgteaca atagegetga gegaeggtae aaaacacatg 2940 gaacaagtgg tagtgtttgg caatcgcagg cgaatgcggg cagacagact ccattgaggt 3000 gacgaaagct tgcatctggc tcaggtcttg aaggctgccc gtttcaatta catggcagaa 3060 tagcacaata aaaggcacaa aggggacgaa gagaatagac ctagacgaac aatgagttgt 3120 aagctaccaa agagtggtgt tccagacgta ccacgttata tgcccagata agagatctgt 3180 ateggtegtg ccaaacteae gaataaagga etggtggeet teeagtgeag eeegtgetga 3240 ttcaagactt tettegttga atgttgaaga agaeeeegtt tggaeeggea tagegeggta 3300

tatcagagtc aacatagact gacggaggac atcttcggat atggtgctgg attttatcct 3360 ttgggcgtgc tcctgggttg cggatcgaag ccaggattcc tgtagaaatt attagagccc 3420 gtagctacac aaggataggg aggttgtaca gtggccatcc tgcaatccgt cgagagtccc 3480 tgcagctgct gcgctagtac cgtcgcacga tgtctccgta catccactgg cagagaaaga 3540 gagccagcgc aatatagttc ctcgtaaatt ctccctgcca agcgagcaag ttccaccaag 3600 tacccaaagt actccataag ctgagagtcc ggcgacgagc ttgttcgaga cgatggcgct 3660 gggacggtga tatcgctgtc caggatggtg gaagactggc cattgcgtaa agatagagtc 3720 ttctcaagaa agtacaccag ccagaacaat agtcccttgc tgttgggctg gttcgttgat 3780 gaatcggtcc cgacggatcg agtatggtat cctagaagtc gcgcgctttg agaggcagca 3840 ttcactagaa tggacgccag agagcccttt gcattaccaa tcgcatatgt ggccttcqtg 3900 cggtagctgt cagccggaaa tgatctgtac gcggaggccg gagagggcaa gacttactgc 3960 aagaacaaga gegaatacca tetegtgget tggetgaata taaagaggea geetggacag 4020 ggcggtttct aggttgacac gacaggtgga cagtaagttc tcgggattat cgtttaggga 4080 gctgttcgct tgttgttgga ttacgccagc ccaagttgcg aaaacttttg acatggtatt 4140 agcettgegg ttgteaggea agaegegatg atagegteae teacagtata aggetgeatt 4200 gacgataata aactetgeat eegagtaete aggegagaaa tataeettea ggeagagate 4260 tgagaggete tetgagetta aaaacatett gaaagaetee geeageegtt ggatatetae 4320 gctgtctgtc aaaataaaac gtggttagca tcaatttccc acttaaaccc cttgtagcaa 4380 taaagcaagc accttgtgcc tcccgtagga tgctcacagt cacttcgatt ggaggcattt 4440 cgtactttgg caggcctgcg gctggctcta accgtgcgtg agggaacaag gatgtcgccg 4500 caagcgactg gtagctaaac gactctacaa actgaaacct cgtcttcagt aaacatgttc 4560 cctctccggt gatgtctctc tcttgcaaga aaaaaacagc gtagtgtagg aaacggacag 4620 caaacgaaga ctgcccccc 4640

<sup>&</sup>lt;210> 3348 <211> 1828 <212> DNA <213> Aspergillus nidulans <400> 3348

actacgagat ccacgaatct ttattttctc ttctctatat ctattcagct ttctactttt 60 ttatcctgtc atttctggcg tgcatggtgc atggtaaaaa aggaatggag cacagcacaa aacttgaatt gatcgagccg gttttggagt tcttggatgg attgaatttg gattggtgga 180 caaaatcatt ggactggttg cattcatatt gcatttacat ttgcattcac cgatcttgcc 240 tgtatctagc gttagcctac aaatagctat agcaattacc acatattact tgaaccatca 300 acateceetg geattgtata teettgatte tegtggtaag ttggteeace ggeetagaat cttctagcat cgacttcccc actcgatata cctaggcaaa gagtctaatc accttatact caagccggtt gcaagttaat taggcgggtc cctccaaaca aacaaattga agttgcgccc 480 gcatatgtag ttctgctatc ttcgaaattt gtatactctg agtagccttg caccttaacc 540 gtggcggcgt gcctccacct cgtgccctgc acttcaacag aatgggttca aaaggtgcag 600 taccgcacca tccatctgaa ttgttattaa gaagacttgt tttggttata agaatttaga 660 ttattatgta cataattgtt cttaataatc ggtacgtacc acctagcaat atcgaagaat 720 atcaacatca atagtcagta tccactcaac cgcccactgg ggttcatcgg gggaaactcg 780 ggcttactct agtctctgtc caggaacgaa ttccagtttc agggcccaag ttttgagact 840 ggagtttacc cggggtctcc aggcgtcggg attcgggaca cgaggaattc ggaggagagg 900 aatgaagtgg ggatcctcgt ggtgggtaag tagatcagta tagtgtatac ataagtgtga tggcagtgag agggagactc gattctgaac ccccgacatt atccaggtag tctagatatg 1020 aattgtagta aatgaagete atgtttegtt accetgatea gategettga etgeetgaet 1080 gcgttctcag gattctgctg acacctggga tttaccagcg aatttaccga ggataagttc 1140 tatatagata tgtcatgtaa gaagaattgg tatcaccctc atttttaggt atctaaatca 1200 aaaaaccatc taacccgaac aaagcgacgc ccgctataac atacaaaccg acaacccagt 1260 gataaatcat aatgcaagct catcatcgtc atcatcccag cccaatgccg aatatatcga 1320 tttctccggc gtcacaggca cgacttgcgc ctctttaggg gcagaagcaa gggcagaaac 1380 aggaccegae ceagaaagat taggttgaeg ageggteaee acagggaeag gaeetggage 1440 aggtttaggc ttcggaggtg tctcaaagac cattgaagag tttgatgggg ttttttttggt 1500 aggtagagca aagagcggcg ggggtggcgg gggtaaattt gtttcaatat ggcggctgtc 1560 gagaggtgtg acagettetg tageatetat atgetgtgat eggaegggag teatgggtee 1620

tgtttctgtg gtttgagagg ctggtcggcg gggaacgcgg aagaggtttc cagtcctgg 1680

aatcggggtt tctgccacgg caggttcggt ggtgtcttta gatgagctcg gaggctgagg 1740

tggacggcgt gacggcgtct cttgtaccgc ggcatcagtt gtaaagggca aagagctggg 1800

cttattggta gatccaggga taacttgc 1828

- <210> 3349 <211> 1578 <212> DNA
- <213> Aspergillus nidulans
- <400> 3349

gagataatag aagaggagtt gattgaagag gaagataaga agtaagatga atgagataag ttaatgaaga aaaaggagta ggaaaagagg tagtaaaaatg tagattagag gggagtaaga 180 aaggggaaat gggaagagga aggtggaatg atgagggata agaaggagtt gatgaagtaa 240 gtatatgaat agaggaagga gaaggatatg agataaagaa gagtgcgaag attaaagtgg 300 agagaagcag gtgaaaaaga gataaagagt aaaaacaaga agaggattaa gcaagaagga 360 aaaaattaag ggaagagaga taatgggtgg aaggtccaac aaagtccccc aggagaccct 420 tetaaaccat ecegeeacag ttecagatee ettettete agageeecaa aacgeetace 480 geggtgggca taacgeeete aaateteage tggaatgaga egettgegga etatgeeaaa gactgggcga aggggtgtaa gtggaagcac tctgtacgta ccttattttt tttcttgata 600 tatagaatac gtagaataga ttttgctgat tagagtccca actggttctt gcaagatagt 660 ccggcccgta tggcgaaaac cttgcatacg gttacaaaaa ggcctcctcc gcagtgacgg 720 catggggtga cgaagcagca ctttatgatt tttccaagcc aacgggattc aacgaggaca 780 cgggacattt tacacagcct tgtttgggaa cgtacaaaga ggtcgggtgc gctgctgttg 840 attgtggatt gacggatctg gacgatgacg agaaagaaag agcgcagggg tggtatgttg 900 tttgcgagta tatgcctgca gggaatgtgg ttggagcaga tgacgggctg gagtatttcc gagtaaatgt gcaggagga agcgaggatt ctgattcaag ttccgaggat gattctgagc 1020 acggagacgg gggtgaggga agcgatgttt ccgattttgg gaatagagct agtcgtgggt 1080 tggtggagtg gagtaaagag cgtgttgcat ggtgggttgg gatagttcta tatatactga 1140

getetteata aaaaaagggg gegetgtagt gaagtaette gtggetegte attgetgtea 1200 ttacteatae taccaacate atgeatatag attteeggea gegggagaga tgeaaaatat 1260 etatteaett ttgaacagte eeagagegee acceecaaae tagaaceaeg ceaatggaae 1320 ageacaaaeg geacacaagg agggaggaga agtgggegge acagagegga aatggtggga 1380 gggeetggat ategagaegg etgacaatat agagaaaaaa aggaagttgg aatgaaatta 1440 gataegataa gaegagataa gggtaateaa eeaataatet eetegette gteeagaate 1500 tetteeacaa tetettegae eacegteteg eeettgteet etggttggt gggegeatee 1560 ttggeageet tgggttgg

<210> 3350 <211> 757 <212> DNA

<213> Aspergillus nidulans

<400> 3350

tatagtatac agtatgcagt atacagatag gtcccgtgtc cttttttttc tggtttatat 60 teegteteet eteagettge agaggagaga ceagtgtegg caaaatgaet acteeagege 120 accaggagee caaegaceet ageaeegtet eagttaegge etetteteea geteettege 180 atcatgtctt caatgagcag actaattatg tcccaaaaag gacaatcatc accgtaatat 240 atacggatac cccactgttc tcagacaatg caggttaacg cggctgccag atattccttg 300 cctgctcaac cgtcgacctc atagccctaa tggaccagac caccctagcg gccagtttgt 360 ccatcattgg caacgccttg cacgccagtg acaaggccgc ctggatatca ggcgggtatt 420 tagtgcacgt ctccgtctcc ctctttatct catgtcccaa tctcgtggac attgtaaaca 480 tttggtgaac atgtactcac tactatgcac acqcqqqcaq aacatcaacc tqcttccaqc tectetatgg tegtetgteg gatatetggt etegtaaate ggteetette gteggaetgg cgatcttctt catcggctct ctcgcgtcgt ccctagctca atctggaacc cagctcatcg 660 tetteegege etteaetgge gtaggtggeg gageeetgat gaeggttgeg eagatgaetg 720 taagtgatgt cgtgcccctt cgagaacgat ggaaata 757

<210> 3351 <211> 2040 <212> DNA <213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3351

ctactcacaa cgtaacgtag atctgctcta gacgctctag ctgtaagcca tatagtacgc 60 tatggtctca tctccccacc cgttcgatct atcatcgaac tatattcaqc qccttacacc 120 cacttgtcgg gcagccctga caatatatat tttcccatct ggccgtccga qatttcagtc 180 cccgtcaaga ccatttacgg atttacgttt cacagttaca cttgcatgaa atgtgaaacg 240 gtgaaactac tgtagcgtga ctggggcaaa gtcctctgga gcaacctcgc tgatagatta 300 gggctaaatc acaaatgacc cactggtcca tctctaggcc agatcgtacc aattcttctt 360 gcgtaccata aagctggagt ccagccgttg ccgtcctaga aatagcaggc ccgcagtgag 420 gtggacgacg atgcttctag gtatatgccg tggtatggtc gttctttcct gtttagtgga 480 caagaagetg, teatggacaa ggaaggageg actetggeeg tteetgetea taccettege 540 acttgggact tcgcatttct ttctgaaccg tgttccttgg tatctacatc cctatccatc 600 cgtccatcca tccatgtacc tatataaaga tagatatata catgtctctc ttcttctatg ttcttctctt tcttcctcat ccccctgtcg aaggacgacg gcgctacaac caacccgatc 720 tagageceag cegtgeetge etaactacaa getgaegata atteetgteg gegteeaatg 780 ggcactacat tggtcctgct ctcggctctc aggcatgctc tgcacaattt aatgctctgt 840 acagttaatg gccgcttaag gctagcctgt cggccgagaa gcagtgcctc ggctcagaga gcctcctact ctggaagact ctaagaatcc accagatgcc tgtcactggc aagctggata 960 ageteattge eggateaggg attattgaea geaaatatae eeeeggetae eeeggeegtt 1020 cgccaccaat aggggcccac tgtcatgtct accctggcta ccccggatat cgtatgcacc 1080 tggacaagcc gacccggata tcccgagctg accaacttca ccagctataa cataccttcg 1140 ctcctactca ggcccagcag actcaccatc aacactggct acaactacaa ccacagccag 1200 agatgacatc gcttaatatt ctagtcgtcg gcgccggcct ctcaggcctc gcaacagcca 1260 tetettgege ceagteeggt cacacegtea cegttetega geaggeegee gagettgeag 1320 aagteggege tggeetgeaa gteaeeecea ategeteeeg getetteaat caetgggtet 1380 ccgccaatcc ctctggcgcg aggcccccga gccgaagacc ctcaccgtgc atcggtatac 1440 gggcgatgtc ctagcgcatg acgccttttt tgacaagcat atacggcacg gctacggcgc 1500

accepticum gatericace gegerante teageagee tegracee gegerana 1560 actericate green tegragada geranagae atactagate egegerane 1620 agagacetea actericae tecreacega green geranagae accepticum 1680 tegregera gatericae geranagae ecgerater 1680 gereceticae acepticae geranagae ecgerater 1680 terrenagae gatericae geranagae ecgerater 1680 gereceticae acepticae ecgerater ecceticae geranagae 1740 gereceticae acepticae ecgerater ecceticae acepticae acepticae ecgerater ecceticae acepticae 1800 geranagae ecgerater eccenagae ecceticae ecgerage 1860 geranagae ecceticae eccetica

- <210> 3352 <211> 1013
- <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 3352

ttetttgeat ccagaacgeg ettagegtea egtgteacea gaeggetttt eeaggettet 60 tattccatac agttagcaaa tgatatctga agggatggtg tacagaaaga tacctactcc 120 ttegteteag acageegete ateetattga cegttetggt aegeeaceat teeggteata 180 ccacgcacgg gtgagctcga ctggaacgtc atctaagagt accagcagtg gctatgcaaa 240 cgatagacgc acataccccc cacaacactc ctctaaagcc acccagccgc agccgcaqcg 300 cagacgecgg caegteaatg ctetagattg teaggetgaa gagaaatgta geagetegge 360 gttgattggc ggtggtacaa catgactgga tacaggcagt gcggcaatga agggtaacta aggattgaag tttgatgtta ggtgttggtg aaaattaccc tgagccccgg ctttcgatat 480 catatccaaa ttctccacaa caaaagccat aaaccgcaca gagagactgg ggtcattatc 540 ttgaagcggc aaagtgatgg ggctgcgaag aatgtctgaa ttacggtggc tttttagcag 600 cctaggtgtc aagcttggat tatgactgtc aaactaaggc gcgtgtctat ttgaataacc 660 tcaactgtac cgtattagga agccacaacc cggcggtccg cttcttcaac cttcgtcaga 720 gccgacctat tgattcagct ctatagccag ctgtcatcag ttcatggcag acgctaatta

ggttaacctt	caaatcatgg	attcacacta	ttaccgagtc	ctacaccacc	ctaacttatg	840
actagtgtac	aacattccca	gaacaagtct	aacaagctag	tgcccccgc	ccatacccct	900
ctcccaattc	tcttccacaa	caccccaata	cctctcgcga	ctcctaactc	tacacccctt	960
ccccacttg	accatgacat	ggaaaacagc	cgaacatgcc	atgeneacaa	acg	1013
<210> <211> <212> <213>	3353 665 DNA Aspergillu	s nidulans				
<400>	3353			•		
attgtctgag	taagttgtct	tctgttggta	aagacttgaa	tatatctgat	gtggcaatct	60
tttctctatg	cacctttctt	tataaacatc	taccactctc	tgtacgctcc	cagcatgatt	120
ttgatgtact	ctccattgag	aaggctacgg	acggatgaga	ggggtcatca	gtgctagcaa	180
tagaccattc	ggaaagaacg	gcataactgg	ggtattgttg	gggtaattcc	ttaatgggcg	240
ccagcatatg	gacacgttat	ggcgtcaggc	caggtgctgt	tcttctattc	ttctctccat	300
ccaccgtcct	accaactttg	ttcgggcttc	ctgttctata	taagtagctc	tgagttttga	360
tgtaggctaa	tatagagatg	cccacggctg	cggcagtaga	gttgggcttc	ggcataagta	420
ctgcggatag	ttggcgacat	aatcgccgag	gataattgag	ctttagccgg	caggccatat	480
aaaggccgat	ctccccgcag	aatctcttaa	acacaatcat	tacacgcaag	agaacaacta	540
catgtatacc	cgcaaagacg	ttgcccacca	taacgcccgg	cactcatgct	aagacattgt	600
cagcaaccat	gtctacgacg	tgaccaagtt	cctcgacgcg	cgcctccgtc	ggcacaagcg	660
ccatt						665
**	3354 757 DNA Aspergillus	s nidulans	·		÷	
ccaaattgag	cccttcacat	taaccacaaa	ccaatcaaaa	taaqttcaaa	tactotocco	60
		agcactagcc				120
		cactggcaac				180
	33					-00

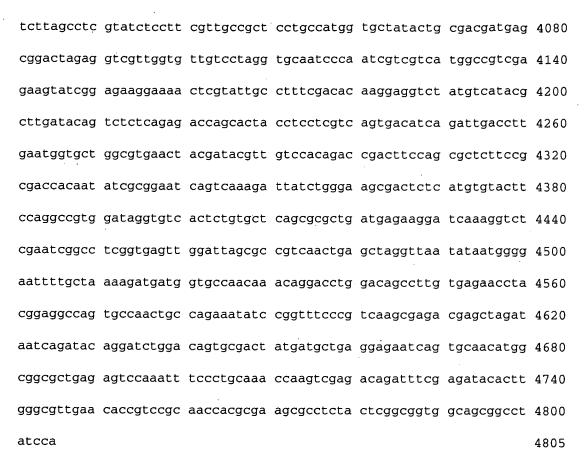
tcagcatgct caagaaccat gtaaccaagt attagaaact tgcggatccc cgtctgtacg 240 caageteacg aaaagetage aaatgactee aaacatgetg cagtateatt qaettqaaqq 300 gcgttggtat tacaaacgcc ccgtccgtgt acggctatct caaaatgact tccgccgtct 360 ctcaaaacta ctatcccgag cgacttggaa agctgtattt gatcaatgcc ccgtcggctt 420 tcagcaccgt tttcagcgta gtaaagagct tcctggaccc tgtcactgtt aacaagattc 480 atgtccttgg ctccggatac caatccgagc tgctgaagca agttcccaaa gagaatctcc 540 cccagcagta cggtggcacc tgtcagtgtg agggaggatg cgagtacagt gatatgggcc 600 cgtggcggga acccgaatgg gcgtagagaa ccgaagtggg caaaccccaa gggaaacaag 660 ggcgatgtcc ggctgagaac ctgtcgcaga aaagccgaca gaggcgccgg acgccctcaa 720 cccgcggcat agagtcatta ctaggggctt tgtctca 757 <210> 3355 <211> 4805 <212> DNA <213> Aspergillus nidulans <400> 3355 acaacagcct ggagacccgg atgactgatc atgtcctcgt agttggtgta cagcgtaacg 60 ccgtacggct cgagatgctg ctttgcccat tggacctcct caggatcagg ggagaacgca 120 gcaactaget cagegegegg ggegeggttg aggaagttca gggcatggeg tttgcccatg 180 cggccgaggc cagcggcgcc gacttgcagt tttttggggg acatcctctt atagaagaat 240 agttaaagtg ctgtaatact gtctctcttg atttagacag cagggacggg gccatgaagg 300 gctttatagc tttggattcc ctggccaggt ctcctcttca ccttttcatg catcctcatg 360 cateccegtt atggtcatgt acgttttgga gcatatectt tggtgetttt tecetetgta 420 ccgaataggg ctacctagtg cgctgtgctc ggaagcttat tgcctaatcc actggaactg 480 gtagctttcg cccgaataca gctcggagga aatccgacac taaccccata atctagaata 540 ggaaaattat acccgggcca gcgaactaaa ctagtggact gactcctatt tccaatagcc 600 ccgtggggtg ctgctcgctc tcgcacgctg tgctggaacq caaqqtqtqq qqaaatqtac 660 gaagacttct aatagaaatt teeteagett aaagatteag egegeeeec attaggeaae 720

780

atcatgcacc cttaaagact ttggttgctc taaatgaaac atgcgaacac ttagcggaga

gttttgaaac ccatcaaggg aaatcagaaa aatatagaaa tgacgtcaaa caaaccacat catggcccag cagcagtaaa cccacataaa cccagcaata ttgcacagcc gtatcaggat 900 tcagcacccc agaaaaagag gatatcagga ctagaacaag cctgtaactt cttgtgcata 1020 gtgcataaat atctccatag catcgggcgc gatctcgcct ataggcatga tcctcacatt 1080 gtgctcgaca gtataaatct tgccaaagtt gagcctcgac atcgaatcaa gtcttccagt 1140 ttcagctgcc agaactactg gcaatggccc catggtcata ggtggctcat ccgtcctaat 1200 aattggcgtt gtcccgcgtt catagagcac aacatgctgt gacggattga ggccagactt 1260 cttcaacccc cgtcctccat acgtagtgat tgcgctgaat ccaaattagt tgtgtatttg 1320 gggtgaccga gtacttacaa gcaccatgaa acttgctcta ttttcctqaa caccaccatq 1380 cggcggatgg tgctgtatat aggttccccg aacctcccga tatactgtgg gcctcgctcc 1440 aagacagaag aacgggcagc cgagccataa ctagggctct catgccacaa gattgcaaaa 1500 atctatactt tgcaagttag tacccagaaa actgcggccg ccagggacgc tgagtgcttg 1560 cctttccggg gctaaagaag tgtggtgact ggacggtgta tcctacaacg ttgtcagtaa 1620 tcatgagggt aatggaaagt gccgcattac tgacgagggt cgagtacacc attagcgctc 1680 aagtgtggaa gctgcaagta atttagtgtg cttgttccaa aaacgaagtc tcgctgaagc 1740 teaeggeegg etgaggtgge aetggategt eeettgetet attateetgt ggeteeaaat 1800 gtgagcattg agtaatcgaa ggttcacagg gtatccatac cccgagcatc tccacagttg 1860 caggagtcta cactcgaaaa caggttagca aatattgatg tttacacagc tgttgagtga 1920 tatcaggggc gtttgttatg gaaacgacca ggaaacgggc caagagcggc cattcctttt 1980 tettaatate aetgtttttt ettetatete ttttataeat tteeatttga ggtetggagt 2040 caagagaata acaatgtgac ttaccccgct gatcgttgca tctcttacaa aatcgacgtg 2100 gactattata tcattataga gactgtcgta gtccagggga atcgggtgcc cattcgggtc 2160 tgtgtatttg aagacagtct ctggaggcag tctatatacc gttttcaggt gagctgcact 2220 taccgtttcc accacgtcct cgggacggag ctgtatacgc gtgacaccaa acccacacgc 2280 agtgaggtcc aggtgtattg tetttgtatg tgctgcccat tcatcgtcaa aatcagagtc 2340 ttccgaaccg ctgtcccagt ctatagaccc aatattggca ctgttggagt gtcccgctgc 2400

atcctggtcg gtattagtgg ctttcgtgtt accagaaaag acaaaacaag caatgtgccg 2460 taaatggctt gcaatgtggt gagctgttga gtctgcgcgt gtacatatcg gacaggttcg 2520 tgttgctgta ggttgaatgc catggctgga tgactcatgg gatgcccaat cagtgaaggt 2580 atcatattgt tggtcggcat ccttgcaatt cttgaacgtg caaatatacg gtcgaaggtc 2640 gegeagaata tgteteetag caataegtea getattgteg geeageeeee tgtgeaagea 2700 egtateteae etecatgeat ggggtetege tgteteetet geacagatgg taaageagta 2760 ggggcattca aactcgggac tgtcagcgtc caccactgga ggggctggaa qttcaaqaqq 2820 atcaaaggtg ccaccggaag tgacaacaaa agtatccgtt gacactgtcg actcagtctc 2880 tagtatgacc gatgtgtttg gactggtggc agtagacggc tcagaaggcc gagtgttcct 2940 ctggatggaa gtcgtttcta gctccctcaa ccagcgacaa ccagtcgcga cgttgtgata 3000 atattggtat ttaattttcc gcctctccca gtatctgaac tgttttctgc gattcatatt 3060 ggctctcgcc aggcgctcga ccataaactg aggaccagcc tcatcgccta ctctccaggt 3120 tegaaagage teetetagge gaegggaate tettteeata tatgetteea teagateaac 3180 accegtetea etatecacet etttatagga caaegeettt gagageeeag ttegeatttt 3240 gggattgcgg accetgaacg agagtgcgta aagecgattg accgtggtag agatatttgt 3300 cagatactgg tegggeaatg acceptectg ataggatgaa aagtettegg actegteate 3360 actcagggtt agatcatcaa aatcatcaac aattgcctcc tgggaatggg gtcctggcgc 3420 aacctgcagg gcgactttcc ctcagttcaa atgggttagt atcgccgcct ttcaatggac 3480 gcatggcaag cttacaagca gacagggctt cactgaggtc gtataacagg ttagatgtgt 3540 actcaaacaa tggggatgag tctcgaaacc ggtagtcgag tgagctgtgc ccatcgtgga 3600 aaacacccag gtttgatgcc catatgtcga accgttgagc ctcgttgaga aaccgtcgca 3660 gatgattegt atteatggte tggeteagaa egegaaateg tgtaettatt teattgeeaa 3720 taaagcgaag ggaagactgg ggggtggtag tttcatccat atccacgggc tcacagattt 3780 gggggcaaat titggagtga cgctaccccc gagacgtcaa aaaagaggtg gtgttcgaat 3840 cacttttaag atatgaggga gaatgaagga caaagattac agacagctaa aagaggggcc 3900 eceggeteaa acaggtggtg tgetggtegt cagacetete attgattegt cagtgteage 3960 tataaattac aaaccgctgg ccacaaggct ggacaaaacc ccgcacctgg acaaaaggca 4020



	*
<210>	3356
<211>	724
<212>	DNA
<213>	Aspergillus nidulans
	`
<400>	3356

acattcggtc	tgcttcgtga	gttcagagtg	agcctcaacg	gtccagttgc	tgatgtcgtg	600
aagtcgtcga	gacaatagct	gacattctct	gcttgagcct	cggaagccca	tgaatgaagc	660
atgcatccac	gcactgctac	attgtcgaca	gtatcaccat	ttgatcgaga	aggacgaatg	720
ttgc						724
<210><211><211><212><213>	3357 1092 DNA Aspergillus	s nidulans				
<400>	3357					
gtttttaatc	ttttcagctg	tgcgagtgga	tgtcgtcagt	gcggaaataa	tgctcagttt	60
gttttcgggc	attgacaagg	tgatcatgtc	gctagggaag	ctatcgagta	atgggtactg	120
tagtggcgtg	tggaatctag	acgacaggaa	tacctgtgtc	agcatctcaa	aaaacggaac	180
acgccgttca	aacaactcac	ctatggaaca	ttggctctga	tttgtaaacc	cgcatcttcc	240
ttacaaaccc	cagatctgct	tcagccaatt	cttcctcttt	atcatctggc	tcgagacctc	300
gcaagacttg	cacctgattg	agaacgtgcg	atttattgct	gcctgaatca	tatgtaaaat	360
ccaagtcaaa	ttcggttctt	accattgacc	ctgacttgca	ggattcgact	ttattgggtt	420
gcttcgacgc	ctgccgttgc	acattcctat	ggtcctttgc	tggcgggaca	attgaggcct	480
gtagctcaaa	tatacgccga	gtgctgtcat	cgcctgctag	caaggactcg	aaattctggt	540
acggccgtag	tcgggttgga	agagtaatgc	tttccatggc	aatgctggtc	aatgccgatg	600
tgtaccattc	agaattattg	tcgacccgta	tggtgctcgg	taatcgactg	ggaggatcta	660
taatgggcgt	gtacatcgtc	gcttcaggcg	acatagagta	cactgaccga	gctttatttg	720
tttcacgttt	cagtttggca	gtctgtgaag	gccgtcatga	ataagctgtc	tttccaggta	780
attaggccgg	ttttaggccg	gttgtatgac	ttgcttgatg	aatccttgaa	ccatcttcaa	840
tagcccacag	caggacggcc	ttctttccgt	actcatcaac	tagcctgtcc	acatacctgg	900
ctgtgaagcc	gccccgagca	tcatcagatg	aagtgaatat	gtgcaaggcc	agtagctggt	960
cacacttttc	tgcaaatgga	cgaccgtccc	ggtcgagcaa	atcatgctcc	ttgtcgagct	1020
cgttaaagag	atcctccccg	aggaaacagt	cgacaaacgg	cataaatgcg	cacttgagct	1080
cgtaatcatt	ga					1092

<210> 3358 <211> 4197 <212> DNA <213> Aspergillus nidulans <400> 3358

aacacttggg cccagtattt caccaatgcc attccagact accgccgtgc cggtatcatg 60 tegetaggea tgattgtgga gggegeeet gattteatea geaeceagat gaaggaaate atgeceattg ttetecaget cettgetgae ggegagetea aggttegeea ggecaceetg catgccgttg cgcgcttggc cgacgatctt actgaagatc tcaatcgcga ccacgagaag 240 ctcatgcctc tgctcttcca gaaccttgcc agcgctatgc aggagtccaa gggcgaggag 300 gaaggcccca ctgttgacat catgaaggct ggtctcagtg ctattgatgc cgttgttgat ggactcgacg agaaggacgt tgctccctac cagaacgagc ttgtccccat ccttcaccag 420 ctcttcaagc accccaacta cagaatcaag ggtctcgctg ctggtgccct tggctctctc 480 gettettetg etggegagge gtteeteece ttetttgaeg aetetatgea eetacteeag 540 gaatttgcca ccgttaagga cagcgaggag cagcttgacc ttcgcgccag tgtgaccgat 600 gccatgggtg agatgtccgc tgctgccggc cctgagcgtt accaggctta cgttgagcct 660 ttaatgcgcg ccactgagga ggctcttcac cttggacact ctcgtcttaa ggagagtacc 720 tacattttct ggggcgctat ggccaaggtc tacggcgagc acttcgctac cttccttgac 780 ggtgctgtca agggtctctt caactgtctg gagcaggatg acgatgacct tgagctctct 840 ctcggtgagg ccgccaagga cctcattggc caggaggtga ccgttgccgg ccgcaaggtc 900 aaggttgcca gcgctgagga cgacgatgac gagcccgtcg gcgaggatgg cgagattgaa gacgtcgatc ttgacgatga ggatgactgg gacgacatta ccgccaccac tcctctagcc 1020 ctcgagaagg agattgcgat tgagatcatt ggtgatctcg tcacgcacac ccgtagcgcc 1080 taccttccct actttgagaa gaccattgag atggttatgc ctcttgttga gcacccttac 1140 gagggtgtcc gcaaggctac catcagcact atgcaccgct cctatgccat gctcttcacc 1200 attgctgagg agtccggcca gatgcccaag tggaagcccg gtcttcccct ccaggttgag 1260 cccgccaagg aggttaagaa gtttggtgag attctcatga ctgcgaccat caagatgtgg 1320 actgaggaag atgatcggta tgtcaacttg agctttattt ctataccctt cccaaaatca 1380

tatgatgaaa acactegttt aacccagete actttgacge acaagttgeg attgatgtga 1440 aagacgttta tctactcctg atgattcatt attctgccta ttatttgtta cgtggcgttt 1500 tgtgaccact gctaactcgc ataaaccaga tccactgtcg ctgacatcaa ccgcaacatg 1560 gctgagaacc tccgcttctg cggtcctgct ctcattgcca acgagactac tttgcacaac 1620 gtcatccaga tgattaccga cattatcacc aagaagcacc cttgccagct cgagttcgct 1680 gaggaggatg ttgatgctgg cgaggaaact tctgagttcg actggattgt cgttgatacc 1740 gcccttgacg ttgtctccgg tatggctgct gctcttggcg agagcttcgc cgagctctgq 1800 aaggtatteg agaagategt ceeteegeta egeeggeage acegaateea ttgagegtge 1860 cactgoggtt ggtgtccttg ccgagtgtat caacggcatg ggtgctgcct ctacccagtt 1920 caccectgee treetcaage recttgreea eegeergage gaegaggace ereagaceaa 1980 gtccaacgca gcttacgctg tcggccgcct catcgaacac tcgaactcgc tgaggttgtc 2040 aaagagtttc ccaccatcct cagtcgtctc gagcaatgcc ttcaccagga tgtctcccgc 2100 ctccaggaca acgccactgg ctgcttgtct cgcatgattc tcaagcaccg cgagagcgtt 2160 cccatcaagg acgtccttcc cgtcctcgtc aacatccttc ccctgaagaa cgactacgag 2220 gagaacgacc ccctgtaccg catgatctgc cagatgtaca aatgggagga cccgactatc 2280 cgtgagetea egeegeagtt ceteceegte tteeagteeg teetttgegg egatacegae 2340 cagctagagg acgagcgccg ggctgaactc atcgagctcg tcaagtggct gaaccagatg 2400 cagcctggtg ctgcccctg ggctgagcag ctgtaatgct gtaacgcgct tcgcctcgct 2460 tgctatgatg agttacggac gccaacaact taacgtaatg gatactggat agactggaca 2520 tgttttggac gattactaga aagataccct agcgccgggc cggtgagcct gcgcaatgac 2580 cacggactgc cacagtgtat gggctatggc aacgacttat gatggaagat aacagaaaag 2640 tttgtatata ctgttagaat catgtctttc cttatttcct tataaccaga ttgtgtgcct 2700 gccttctctc ctttatggct gcctacacag tgtaatcaaa tagtgaggca gatgctaagc 2760 ccgcgctatt attagctcgc gccttagtac tgccacgtga gcattctgac cgacccaccg 2820 cettlettaa geeetgegte ategtteeeg thatetega theaatatte teettegatt 2880 cattccacgg ttccctgtgg caaacaattt aagctgagct gatcccaacc ctaccttctc 2940 acgeteagaa aaceaacaaa gtgeaceatg eeeteeatea egacaceeet gaactggaet 3000

ctcccttcct cgggctccag ctccggctct tcaatcacca agcccatcaa gactgtctct 3060 aagccctgtt ttggctgtga ctgcggggat accgagtgcg atttttgtat ctgtaccgtt 3120 atgtgagggg atagctaggt atggcgtctg tattccctct gggcatgagt tgagtaatta 3180 acaagaattt tgtagttgcg cgttctggtt cagctgggtg gatggcggag gtagtgaaag 3240 cagtggacag tgtcttaaca gatgggctgt ggtttataag ctcactgaag tttttgcaaa 3300 gcccttttag tttatatcca agctataagt tgttcttggg ccaatgccat cttattttct 3360 tgtattgttt ctctagtgta ctagcagaca agttctctta tgagggttgc tatcggaagc 3420 tcccgctaag actcagccgc aaacatacca cctctagtat actgtccagc agggagacag 3480 acatgttgaa gaagtttcag ttctcagcta ttgagctagc gttcggtatt gctttcggac 3540 tacaagatee tacacageae ageggatttg gaggeggtet eeegeagege eettegaeaa 3600 cattaactcc acctctgcgg ggtgctcagg tatactctct tcgactactt cccaattacc 3660 atcacaaacc tettacatee etetetgttg caateegtet tgeeggette tgagtataaa 3720 tcatggatat cgcggacgca cttcaaacgc accccaccgc cataaaatgc atcgacatgc 3780 atacaaccgg cgagccaaca cgtatcatct attccggttt cccgcaatta cgcggcacca 3840 ctcttctcga caagcgcgac gatgctcagt cgcgctacga ccacctccgt aaacgactca 3900 tgcttgaacc gcgcggccac agcgacatgt acggcgctat tttggtggct gatacggaac 3960 tcgtgcagaa aggggatgcg catatcggcg tgttatttac acatgcaggt ggattctcga 4020 ctatgtgcgg gcatgcgact attgccctgg gaaggtttct ggttgatacg gacgatcgaa 4080 atgttttccc aaagaggggc cacttggtag ttgattacga aaagaaagag gtcgaggttc 4140 ggattcatgc gccttgtggg gttgtgacgg tttcggtacc ggtcattagt gatgagc 4197

<210> 3359 <211> 4732 <212> DNA

<213> Aspergillus nidulans

<400> 3359

gcacggaggc ggttggcatc gagatcctcc aggtcgattt cattgagatc aatacccttg 60
acgccgctct tcagttcttc aagttgcttc ttgagttcct gctgacggat gcggtcttgc 120
tcatccttga tgcgcttcag ctcgcgctca cgctgctctt cagcaagtcg ctgcttctca 180

gcctcctgga gttgctgtgt gcggatgcgc ttgcgagttt cctcctctt ttgcttgcgc tgcagggcat ctgtagcagc ctccttcttc ttctcaatga tgacacgacg ttcgagagtg 300 agacgagagt cgttgtatga cgggtcgaca tacatgcatg tgacgtgaag ggtcttagcc 420 agacgggtga gctgcaggcg ggcaatttca gcaggggtgt tctggagacg ctgtaccgag 480 ccgagttcgc tttctgcgga accggcagcg ctgccagagt gcaaagcctt ggcggatgag 540 aaaacgtcgg tgtcaaaggt gaggacaccg gagatgtggt cgacacgaat ggcaaggtca 600 cccttcttgc aaccgttcat gatgaacttt tcaatcatgg aaggagtaat ctggaagggg 660 tcggggaact gagcaagttc gtaaacgaac ttaagctcaa ccgactcgta gacctgcgag 720 agctgctgga agagacgggt gaggatgacc tgctgtagag ggacaacata cttctccatc 780 tegggateat cacegatett ettgaggatg ggggtgaeet tettacagat agacaggggg 840 tggaagtcaa cttccagaat gttgtaaagt tcacgaatct cggggcggac acgcttgagc 900 · aagccettgt teagggeate tetgaatagg acageaegag tggggetttg caacatteeg 960 agcaggttag tgagacgagt gttcttgttc ttacggacct cgtccacgtc aattagcgcg 1020 ccccgcgagc gagacgtgct gatgacgggg atggccaggg cagatagaag aacaaaggaa 1080 gcggccttcg tcatatcggc ctcggtaact gaagggtggt ccttcttgga accctggttg 1140 gtggaaagtg tgacggcgga ttgacggagg aggttgtagt aacggctcca ggcagcagcg 1200 tggaatagat agttctcgct aacaaggaaa atacgagcca gcttctcgta gtagttggcc 1260 atcataacgt tcttagcggg gcgcttgctg aggctcaaga gagtatggat atcctcgatg 1320 ctgcggaaag cttcctgcca gagttccagc tccacggcaa cgttaagctg ctggaaccta 1380 gtgtccaagt gacgctgcag agtatccggg tcgctgaggt taatagcgtg catctgggca 1440 gagtacttgg cggcgttctg aacatggttg cggagaagtt cgcagagtct gcggaactcg 1500 gtcttgcggg tgtacttcaa gcagaactgg aaagcctgta gagcggtggt ctggtacatg 1560 atetecaage gagegtigtt etteaggate tecaaaaeag tteggtaegt eteceaeagg 1620 acggtagcaa ggagaatagt ctcgggggtc tcgattgctt ccagatcttc aacgttggac 1740 gagggagcgg ccgactcgag ggatgactga atctcatcgg ccttagcctg ggcctcagtc 1800

accttcttct ccgcaagctc gatgaacttc ttgagaacga tctgcataat cttattagac 1860 caccgccaac ccacaatatc atcctggctt ttcatacctc gatagttccc acattggagt 1920 totgagogat gtttttgtac tgatacaggc catcottggc agocttacot ttqcqqaqat 1980 cgacgcacag ctcaacaaag aggagcatga ccggctcgag agacgcgatc gggctgctgc 2040 gcgtccgctt ggacgtagca tgttcgtgga ggacggtcag ggcggccgga gcctggccca 2100 cggcgataag ttcctgggcc ctcttcaggc gaaatgcacg ttagaaccaa catgcccgta 2160 aattattttg ttccctccca gacttcagag gcggttgcaa cctactttca ggacattttc 2220 aggtttgata tgcggcggag gcggcatgat gggcgatgta ataagcgatg tttagtattc 2280 tcagtagggc acacaagtcg ttaaagcgaa ctcgacaagg gataggcgca ggtcgagtca 2340 aaaatgcgca acttgcgggc agcagatttg acagccaaaa gtccctgatt agatgatgct 2400 gccacgcgac ggttggcctg gacgtgggag gggaggcgtc ggtggttgtg cgagagccag 2460 aaaaaaaccc aaaccacagc ccgccgccta ctccctccgc tttggggtta agcgattaag 2520 tcacatgact catatatact ccagtatctc aaccgtccac gaactataaa ctacgtcgca 2580 ctcatgtaca ttctggcatt ttgaccggtc tgcaatgtcc tggggagctc tgtaaggagc 2640 atctgtgctt cagtagaacg cgattgggtc tttatccgtg cacaacgagg gaggtgactt 2700 caaaagagga ctcagtactt actctgctgt cgtctatacg tccgccccag aactggggcc 2760 cccctcatct actgtcatag ctctgtgatt ttcgcaagcg atgccaattt caaatataac 2820 aactgcaaga cgcttgaact gttgacagat accaatgata ttaaccaagc agtcaagatc 2880 acgtgaggca tatgaaacgc cggtcacgtt tggtatgtat ccggttgggg gctctccaca 2940 caaagctcaa gcttctccag aaatatttgt agggcaacat aacaattgac gttgaaatcg 3000 gcacagtctt aaggggggta tctataatag attttagggc ctcccggata ataaacgaaa 3060 aagaaaaaca aaggctgatc gtcagccgtt gatgagcatc tggagagaag gaccaggatt 3120 cagggggcct gggaaggtta ggccggtgga ggctaacaca ctttgttcag tacgcggtat 3180 caacaataca agtaatacaa gaagatagga gagcccctc atctagtgtc ctgtaagacg 3240 gtaattegge gtacatacet eteataagea teagettgae eetgqtteat eeateecqtt 3300 cagteegagt gecaggetet teectegete etettgtege tetettgate tetegatett 3360 ttccttcgtc ttcatccttc cattattctt ctattagctt tctagtcgct tttctttat 3420

ctaccttect tetegtegee tettecteeg aagaataata acgteegete geteecteee 3480 tgacgccagc cetecaceca eteteettte eeeggeeteg egteegacet caccacecte 3540 cccttactcc ggtcacccgg aagcgcaatc aatcgggaaa ctctgcgacg tgaaaatcaa 3600 gagegtecta aagttattae egeeettaee getgtegett aetggtegaa eteegetege 3660 gaccteteae gacegeecae aaaatgeetg eetaegaget tegatetgga ggggaegtea 3720 agaacaagaa gcagagtgtg gccgacctca agtaccgccg attgacagag ctcaatgccc 3780 gcctgaagga ggatctcgac cgtccccgag tcaaggtgtc agaggctqcc atqtcqtaag 3840 tecaacateg egeeegeeag caattggtee ttgtegeagt egetgatege attgettttg 3900 ccaggctgat caattactgc aacaatactc gtgacttcat ggtaccgtcg gtatggggac 3960 aggtatgcaa ctcttactcc gaaaagaatt tccttctcta atgccgccca ggtcgacaag 4020 cgtgaagacc catacgcacc ccaacagcag ggaggctgct gtacgatcat gtaatgcctc 4080 atgacacata tactagtatg gtccgaagca gacctatcgc gttgatgggc attgataccc 4140 ccggccgcta tgaccttacc tttctattcc ctaattccgt gccttggatc tctcacattt 4200 tcgaatgcgc tgcctcacgg cttgtatcac acgaaacccg gcaaccgcat tgacattttc 4260 gaagetetat agecaacegg attacgegeg etggeettge aegeettegg aaatgetgae 4320 aagcggagtt catatgtege tetatacagt tggattactg tggatgatta ttgteegega 4380 gatageettg atettattee tteacattet ggteaaaact tttteeacaa tteeettte 4440 gtcggttttc tttctgcgtt tcttctcttt cgatctattt tcgcaatttc ctatgtcgcg 4500 gtggatgggg ttctacggtt caaaaacgaa acaacgtcta gcaagcttta acatggactg 4560 gtcgttccac atcttggtct tgattctgtc gcagcccgct tgtaaattag aacagctgct 4620 tetgetteta caetagtate taegagetta aageatetaa tgeaggtaea aeegtaacae 4680 ttacacaaca caaacattcg agtaccgtag ctatgtataa atcgagggcc tc 4732

<213> Aspergillus nidulans

<400> 3360

ttaatggacg cctgaacaag taaggagacc caagctccag caaggccgat tcatccgtaa 60

<sup>&</sup>lt;210> 3360 <211> 571 <212> DNA

ccatgataac	aatcctcacc	ctcgtctcgt	taccccttcg	cccagttaac	cacgatctac	120
tataggattt	tatcgacatc	agctggccaa	gaacgactct	tcgccttcat	ccaatacact	180
tcccatatcc	tccaccacct	gcttgcgtcc	gcgccctggg	tcgcgctcca	aacccgcctc	240
agcctccttg	cgcgtctccg	ctcaagcagc	agcagcagcc	ccagcgcctc	tagcctcaac	300
cggaaaagca	gcagccccat	caacagcgac	acagaaaccc	cggctcctcg	ccctgaatcc.	360
ctcatgtcag	aagcccgata	tatgctgcgc	ctccttgttc	tacccacgat	catagcttgg	420
ggctccggga	cgctgaattc	tccgccagcg	ggcgaaacca	tgtacgcctt	gggtgtcctc	480
caagatctcg	cataaataaa	cccccagca	ctcgagtctg	ccgctttcct	aaagaaggga	540
ggtgtaatac	ctgagaagat	tcctcaagct	c .			571
<210><211><212><213>	3361 296 DNA Aspergillus	s nidulans	· ,		·	
<400>	3361					
gccggtgaaa	ggctcccgta	tctagcatat	ctacacaaat	tgtgctgcct	aagcaggatt	60
taaagtcagc	agcgtgatta	gcccgcccag	caagctatgc	tgacatatga	gcctcgtttc	120
aagttaaatc	gccgtgctga	cgctgaccct	agctccagat	tctgcgcgtc	caactcgagt	180
ctgttgcggt	tgccggtccc	ttcgctgtag	atacacagca	agacccagcg	tgcccactac	240
acggacgatc	aaccccactg	ttagggagtt	accgactaag	accggagcgt	acttga	296
<210> <211> <212> <213>	3362 2039 DNA Aspergillus	s nidulans			•	÷
<400>	3362					
tagatcgcgc	gccgaattaa	ccctactaaa	gggatcagag	taggcgtaag	gtagataccc	60
ttttcaacca	tgatcctggc	cacctcctca	gtcacgaaat	ttccatgctc	aatacccttc	120
accccattct	cgattgcatg	cagcatggct	ttaggcgtat	aggcgtgggc	cgtgacatac	180
gtccccgcgt	tctctgcaca	ctccacgatg	gcctggatct	cctgcctcgt	gaactgtagc	240
tgctccaatc	gatccgtcgg	cgttgacacc	ccgccactgc	ccatgatctt	aatgaaatcc	300

gcgccagacc ggatctcctc ccgcacggcc gtcatacaag caggcacccc gtcgcagatc eggeegagte egttegtgtg eeeegegeag caetgaacat ggteatgege egageggata 420 tccccgtgcc cgcctgattg cgacagtgcg tgtccggcaa tgaagagtct cgggccagga 480 aagacaccct cctcgattgc ttgtttgaaa gcgagctggg cgccgccgca atcgcggacg gatgtgaacc cgcgatgcag catctgcgct gcgacatatg gctgacgtag aagcgatacg tegttgaagt teecaaaatg cagtggagag aetgggeaag eetgggaetg teeaegaagt 660 ggacgtgcgc atcgaagagg cccgggctga tgtagaggcc tgcgcagtcg acggtgatgt aagactctgg taattcggcg tcgagaggac ggctggacga aacagaggtt attctgccat 780 tttttatcat cacataatga ttctctttta taacaccagc tgcgacatcg acgatgtttg 840 ctgcgctgag gaggtacgac tgaggcgggg gccggagcca gggcttgata tctgcgtctg ttaccgaggc cattgcaaca agctctgaat gctaaaagga aacaaacaag ttccagtcaa 960 tggggagaag agatgataac aagcgtacta tcatgcggag tagttggtgg gttaaatggg 1020 ttgtcggcag tctgcacccg acgtcggcaa cctgcattcg accattattg gagttcctcc 1080 ccggggttga accgtccact cacaaccatt cccaacgcta atcgctgatc aaccactgtt 1140 atcgttgcca gtcatttgga gagctaacga tagccgacat ggagcggctc gagtcagtcg 1200 agactgccct actttataag ggctctcctt cccgtgctag cctcgcccag tacctgcctg 1260 tcgcccaatt caaagtcaac atggacgctt acgacacaaa agtccgtcct tcagaggaga 1320 agagacggtc cagtgacaat gacaatgtca atggcatagt cgagacatac accgaagaag 1380 aggagagggc getegtgege aagetegaea tggteatett geetttegta egegeeeega 1440 acccaggaca aacagaaaca tactaacact gagaactcta gatgtgcctc gtattccttc 1500 tgcaatacct cgataagcaa tcccttagct atgcgggtgt cttcggcctc atcacggatc 1560 tgaacctcac gaacagtcag tactcctggt gcagctcgat cttctacatc ggccagctag 1620 tggccgagta ccctttcatc tacctgatga gccggttgcc actaacaaag ttcgtcggcg 1680 cgacggtcat cctctggggc ataacagtgc gcgtcctcgc ggcgccgcaa aactacccag 1740 gttcgccgcc gtccgatttc tgctagggtt caccgaggga gccgtttcgc cggcttttgt 1800 gaccattacc tctatctggt acaggaagca tgagcacgcg ttgcggacgg ggctgtgggt 1860 gtctatgaac ggtatcgcgc aggtagtcgg gtgtctgctc atgtacggga ttgggaggaa 1920.

eggaagtett gegetgegee atggegeaeg etetteatta tetgeggege getgaeaate 1980 geogegggea tegeettttt tattettatg cettetggge caaaggaege gtggttttt 2039 <210> 3363 <211> 898 <212> DNA <213> Aspergillus nidulans <400> 3363 ggacggtgtt tcctggccca agtacccggc tcatagggcc agctgattqt taqctacacq 60 cccgctttac cgttcttcga ccccggcggc ggcatatcca gaaaagcgaa cataaaatag ccatcttgca cgggatcccg gcatggaaga gatgcggatc gaccctcaaa caagccttca gctcttcaag aggatattca gagcggcaat tgagcatgcg tatgggcaat tgggtqtttt tggaattete egegeeatae acaaacegge geaegaegga atttgtgeea tetgegeega 300 tgaggagata tecegtetee tgateaceat ttteaatgtg ageeegaact gtateategg 360 tgtggaaacg taatctgcga cagacggtgc gagtagtgaa tatctaggtt ggtcatgggc 420 agctgtagga tcgtaactcg cgacatgcgc gccgccttcc gccgggagat attgtagttt tgagcgcggg ctctccagtg tgaaggttca gtaaggtaaa tgagcctgtc cggctgtttt tattgcatcc ggagtgccca cgcactcgca cattcgtgag tatagttcct ccggcaaaat 600 gtggtagaga agctgcagcg cccagtggat gttcatactg aacccaccgc cgcggtagta 660 cgaggattcg tcgcgctcgt gaatcatgaa tgtgaagggc ccggactggc cttctgcctc 720 cagtcgcgcg ttgagctttt gcagcccctg cgcaagcaga agtcttgtta gacctgcacc 780 gatgatgatg atatgtgttt gcttgggccc ctcatggtgt tccccttctc cgtacagaac 840 aaccttcacc agtttcatgt acatcatcgt acagccattc cggggtgggt gctgttca 898 <210> 3364 <211> 468 <212> DNA <213> Aspergillus nidulans <400> 3364 tcaaggtgga gtctaatatg agatggaggt cagtttttcc gtggaagtgc aaaaagatct

atgacgtgag ctgacgctgt gctaggaggg aggtagcaaa agcgcatatg gcgcccaacg 120

agtcaccgat tactcttact actttcccca gactgggcac gaaggatgat tacattcagc cttattaccc tccatctggg ccagctctgc ggtctcaatt tgttccagac gagattgcga 240 acceteacat caggitteca acaetggegg caaatattag ageaaggagg ggeeggaaag 300 ttgagttgaa tgtgccagtg tttaaagaca aaaatactcc tgagccgttt aaggacccaa 360 cggtaaacta tgatcttcat aattggcctg aagatgacga tgtgcgaaat ggagctgcaa 420 aagatggtca tgtctacatg gacgcaatgg cgtttggcat gggcagtt 468 <210> 3365 <211> 809 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 3365 tgacccagaa ttggtcgcca aagcagtggg cctctgaact tgctttgaaa cggggccggc 60 ccagaaaact tattgaggat ggtggtctaa atgcagaaga ggtaaggcgc atccagagac 120 ctgaagactg ggtattgcat cgcattgtgt ttttgatgta accatatcag cgccgtcgca 180 cccaagtccg catggcgcag cgcgcctacc gttcccgcaa agaggcaagt gtctccttgc 240 tgaaagagcg catcggtcag ctcgaggcac caatgaagca gaacagcacg gctgtgatct 300 cgtttggcga cgatctcgtc cgctcgggag ctctagacac gcatccggag ctgctcaaqc 360 cgctcgggaa tacagtgcag gcttgcttgg cgctgccggc gatccctcat aacgagagtg tegeeggete eeegttegat aataceggee acaagegggg gatgetteeg ttategteta 480 gctctagttc ggacggtacg acgggggatg caatgaccat gtccatccc gagttcatcg 540 accycttyca cytaacctyc ayctaccaay cytacctcyt tactycyaac ccytcyytc 600 cacagoggog catogagogg cogttoogta tootgotato tottatgood egogootttq 660 tggccgagta tttcaaagac tggttgctcg ctagagcagg acacatgagt atggaccagt 720 gggaccatat accettett agaateggag gggeaggaae geattateeg gettetagen 780 ggaacgtgca ctacccgttc cccttttct 809 <210> 3366 <211> 1149 <212> DNA <213> Aspergillus nidulans

<400>

<213>

<400>

Aspergillus nidulans

3367

3366

tactaaaggg	atcgtggcgc	tggttatcct	tatccacaca	gggtgtttct	tgatcctgag	60
ggccttagaa	agcttctcaa	aaacaggaac	aaagtcgggg	tgggtagcga	caacatcctt	120
gccctccaca	ccaccgtagt	cgatctggtg	ctcgccaggt	tctcgctgct	tgaaaattcc	180
aggaacgata	ctctgtccaa	caattcgctt	gcccatgtag	tcgaccacaa	tggttcccgg	240
tgtaaacaag	ccattgatgt	cgagctggtt	gacggccttg	ataccaagaa	catccttgcc	300
gacagctaca	cgcgcagctt	catcaccacc	ctcagaagca	aaggtactca	acgccatcag	360
caccgaagga	gtagaagatg	ttgttgtaca	cgaagatatg	agcgtactga	gcctactgga	420
gttgatagga	gcaacttcac	cccgagcgac	caaaacagca	ccgcgggcag	cagactcgtt	480
gtaatcagca	aacagcttgg	atgtaagccg	ctcgcggaaa	acgcggtctt	gaacagtctc	540
gcggggcagt	tccttggtgg	tttggaactc	ttcattccag	tcgcgcagag	tttcagcatt	600
gtccacaccg	gagatgaggţ	agttttcctg	agaccgggtg	atatcgggct	gatgagcgtt	660
tacgttggag	gctggtggag	cgacaagcca	tgggctgcta	ggaatggagt	tttggaaggg	720
gaaggtagtc	agaagatctt	tctggttgtt	ggattcctgg	agttccttga	aggcagcatc	780
aaaggacgga	gaaagctgag	aaatcaggtt	gagaagcgaa	tgcgcgctgc	ccttcttggg	840
aatggttttg	gggaaaggat	cgaatctgct	gttggagcac	ttgttgacga	agaacccaga	900
aacgtgggag	gtgatctgga	actgctctcc	ctcattggta	gtaacctgga	ggtagagcaa	960
gtgtcccttc	tgacggaggt	gatgaggtgg	cgggttccat	ggagaaaggg	agatggactt	1020
gacggtctta	ggagcggggg	cctccgacct	gggaagaata	gtcttcagcg	aggaagatcc	1080
ggggatgtcg	tacttggcaa	gcgaatgctc	cttttctgac	ttctcgctac	cagcctcggc	1140
agcaatcga						1149
-210>	2267					
<210> <211>	3367					
<411> <21.2<	3936					
//L/N	DMA					

gctcgtcctc agcacaggaa tctgcggact cacgaagtga cagccgtaaa cctactatcg 120

tgctgctgaa tgaggcgcaa agtctccctt accgggccgg cgattcttgc cttttatcat

agtcgctcag gtggctcgtt tgcagtccgc agttgaccga ctatagccgc tctacgccag cttttgctca cgatatcgtc atatgcgcat tccagtggaa agtaccccat gataaattca gcgatacggt aaccetacag ggtgggagtc cttcctgagc ttgtccaagt tggaatgtgg 300 gaaacaggtt ggctataggt gcgcacgcgc ggttctggcc cagttcgctc gaatatgatc 360 ttcggagatt tttcgctcaa gcctttgaac attccaatgg agctctgggc atgccctctc 420 tettettate gteteceage tategaeggt teeattgeet cetgtegeta ceetcatggt 480 gctaatcaaa gggatgccta tcgcataagt aagcaacgac gtcagtacta gagggtgtcc 540 aaaccctaaa ggtggagggg tgaatggcca agcatgttga tcttcttgac tttactatca 600 tgatatgttg tagtggaacc taatcctatc ccttgactcc gacaaggatg tacttgtact tgggcattgg cccccgttct gcgtccagct caggtacctc aagatgtccg attgtgagaa agaggaaaac gtgcaagagc ttcagactgc ccttaaggag ctgggcttag agttcacccc 780 agacgggcaa tacgtacgct gggccaatac taatccgaag catccaagaa attggcccac 840 cattcagaag gcatacaaca taggcctgat aatattcctc gaattctata cgtgagtacc gcctgtcttt accgcaacaa gaagcatcaa taacgctagt tgtcttcagc acatcaatca 960 acgcatccgg agtatgtctg agcccatttg catccttggt ttacctctat aatgtgttta 1020 attattgact tgcatcgcag gcaacaacgg caaaagatgc tcggcacgaa cttgagattg 1080 acttgactct ageggtattt ctttttgtct caacgtgcgt atttccacca cgctcaacat 1140 atcacctaat ggagtagtga cataaatgct tattggtgtt caggtacgcg ctggcgcaag 1200 cttttggcaa tgtcgtcttc cctccgtact ctgaggcgtt cggtcggaaa aaactataca 1260 tcatcagcac tgtactattc agcggcttca gcgttatgat tgcagcggta ccctcactgg 1320 gagcaatggt tgcaggacga accttgaccg gcttggtttc ggccgtaccg acggtcatca 1380 tcacgggcag tatagaggac atgttcaata cgcgggaccg tatctggctg gtgtttgctt 1440 atatggtggt tgccaacttc gcggtggcca tgggccctgt gatcagtgga tatatcactg 1500 cctatctggg gtggtaagtt aaaggcaaac ccaccgtatg ccacggaact gacctgcgca 1560 ggagatgggt gtactacatt tcaggaatcg tgacagggct tgtctccgta ttgctgctgg 1620 ggatttgaga gtcacgttcg tcgctgctgc tgacgtggga cgtcgagaag ctgcgtcatg 1680 tgacggggtc atgaatette aagacteaac eeggaegagt eeceaaaete egeatttttg 1740

tgcgcgatgg gctcattcga cccgtacgcc tattcttcac ggagcccatt gtctttgcct 1800 getetetgat gageggetge agegtegeee tettgtacet gtteaeegaa tegetaceta 1860 cgatctacga gtcgatgggc ttcgcacagc cagagtccaa cctacctttc attgcgatgg 1920 ggcaccggga cggactccct ttgctaccag aaaacaagct ggctgggatc tgtcttgggg 2040 caccettcct ggcagttggg ctctggtggt tcgcatggat ggtgcctcct actatacgcg 2100 gggtacattg gcttgtgaca ttgattccgc tattcttcgt cggctttgcg ctcaatgagt 2160 ttgggaccgt gctcgcagga tatctcgcag acagctatca tagctatgca gcaagtgcgt 2220 ttgctgcaat gtcccttgca cgttcattgc tgtcgtcaat ctttccactt gtggcgccta 2280 agatgtttgg tgcgctggga gcaaacattg ccttgtcggt tctggccgct ggtgctatga 2340 tattetgece egtgecatte attitteggt attatggege eagtettege caaagaagea 2400 agtttgcaca gtatagtctg cgcgtgtatg aggagaacac tgttgaaagg gaatattaat 2460 cgttagtgat ggggagtcgc atattggcga tggagttatt tgattttcct ttggcactta 2520 taagagcccg ctcgatagat aggatgcaac cttcccggat gctgtcatca tgtttaccaa 2580 tecatteteg gtetttetee geteactegt ggtgaatgee gteatgteaa eggeeeattg 2640 gccaatcata cccacgttgt ttgtccttct cctcctttgc cgcgcggcgg ggtgagatcg 2700 acgcactcag agetggacce tecatecece aggtgeeeca ggeetecaat agtagteteg 2760 aatgttccgt ctccacgatt cttatcttcc tttgaatgcg accatccccg cttccccage 2820 gtccgttatc agcccggatg gacgcttgtg actatgtgag acgtattcga cctcactgac 2880 teggeegaac actgtgagee etgaceetae getgegtetg getecaaaat eteegegate 2940 agccactate gaceteggga aagaceatgg tatgeacece tacegtetea tactettaaa 3000 gcctggccaa ccccctgtc gtcgggttcc tttgttccgc attcgaccgc agccttttcg 3060 agcctgtgca cgtttggagc ccgttccagt catcatggca gagaaatcga tccaagaaaa 3120 ttcctccagg acttctgata tcgaaaaggt cacttcgttg cacgaccctc agaagtcacg 3180 gctagaccag ttcccggatc cagatgaggg attgagtgag gaggagaggg ctaagattgt 3240 gagatagege teggeteget taggtatage aatggattge tgacatggtt etttegaaeg 3300 tacctaggac cgcgcccttc tctggaagtt ggatatgaaa ttagtcccct ggctaagttt 3360

getttateta gtgteettet tagaeeggtg egttteggte gegtagattg attggateea 3420
tetaaeeggt acaateeaa categgaaat geaaageteg acaaeetteea agaggaeett 3480
ageatgtetg acaaeeaata taatteateg eteaetatt tettegttee gtatgeagte 3540
tttgageeggt tgaeeaatgt eeteeteaaa eggetgegge egagegtett eateeeate 3600
ateatggtet tatgggtagg eetgeeette etegetttge aattgagata tgtaeteaeg 3660
egttgttett tagggtatet geatgetgag eatggaeett gteeataaet gggeeggtet 3720
catgaetgte egtteegea ateeattatt tettagaaee eaaataetga tattgeeagg 3780
eeegetggtt teteegea actgaageeg geettttee eggtgttgge taeteetat 3840
tatgtgggta eaagegeteg gaatttggta ttegaatgge aateetteet taggeegeeg 3900
eeeetaaeeg etteetgggg gggetittge aaetge

<210> 3368 <211> 3267 <212> DNA

<213> Aspergillus nidulans

<400> 3368

gagaactatt gcaattatcg tccagggggg agggtaaacc ttcttatagc ctgttatata ctgttccctg tcccgaaact cctcgtccac atcatactcg cactctcccc catcctgcca gaaccccagt tgcctataga catgcctgcc catactcgac ccctccagca cggcctccag 240 gcccctcgg tgcttagcct catcaagccc ccactgaacc aactttgacg caacccctg 300 tetttgaaac geegggteaa caacacacag atecageace atgaetgetg gegaagaget 360 cgacgcgatt tctttgacca cctcaacccg ccgcttatgc agcgagcggt ccagctgcag 420 caagtatege tgttcaactg gatteecagg gtagategee tetgeattga tgtcaactgg 480 cgtgtctccg tgtccaggta ccatggacgc ctgcacccag atagctaccc cggcgatgac 540 ttcctccccg ttggcgtcgg cgacggtagc cttgagaaag acggtgtttg ggtttccgtt 600 tcgatcggtc gtgatagaag accacctctc aaccagccga cttattgcac gcacttttcc 660 ctcgggggta tcccacccgg gattcatggc gatccagact ccatcgtgca cctgagaqcc gaatgeegat geagaaatgt egaagaagga agtaaagteg gtgggggatg ttatggggga

cacttttata gttggcttaa ctggggccat cttggacagt ctcaacgaga aggttaggca gatggagtga atatgtgttt agcatgtatt tagtatagct tttatggccg tgtagtgtat gtgtccttag cggcgaaccc gggattaccc caattgtggg gcagggctta agcgtccatg 960 tcgttggctt acactattca tgccactgca ggtacgttca tatcggtagg aatatcaagc 1020 ctatgctctc tcacatcacc gtcttcctta cgaatcaata caatgccgat aagctgcgca 1080 atcgcatata ttagccatct gcactgacta tcatacctga gcatcttagt accggcacct 1140 atcggttgta tgtcgggcgg actacgtagt gacatagcac ttgttgtagg agagatttta 1200 ggggggaaaa aaagateeta ttaaggeatt etggtetgta atetgtetta etggaegtet 1260 tcagggtatt tttggtatac gaaagggcgc cctccacgct tatgagagcg gagttccttt 1320 cetttttccg accttggccg tataacaget atetetaceg etettattte tgtgcgcaca 1380 gtttaatgtg attgtcatgt cgttagcaac gctcagtcga ctttggatac ggcattgtct 1440 gcctgctccg tccagagtga ccgcaagcca tcatccccct gaaatggaac atattgtcta 1500 gtgcggagag aagaccaaga aaaagacggc ttcgactatg caggcagcgt agcaaggatg 1560 gaaagtaggc agtcatccgc gtcttaaagg gctcggccta tcgatggcgc aaaatgctac 1620 gcgattatca tcataccgac cggcgaccgc acagtgctta gtgctccacg tgtctgaggc 1680 tettetaggg gagatatece gtegegatat eagageggga ttgegaeate aagegtattt 1740 tgacttcgtg tattgatctg gggcgaaaat ctggggtagg gacctcaaaa acaacgtgta 1800 ctgggctctc tctggatcgc gggcgaagct gatttaagca gctggtgtat tcagtagctc 1860 agagtcattc agaaggaacc agaagacgat tagaggccgg ctgtcgggtt cagaacgttc 1920 aggettagge gaaaggettt aatggeetaa tataaggege acteagettt teegeteeca 1980 acaaaacgcg gcgccgcagc gatcagattc agaggaagaa ctgcgcctct gagctgaatc 2040 tgggccactc aagcagaata cgctctaggc aaaaccctac ggctacgtct tcagccattg 2100 aattgtcgag cggcgaaaca tgctgcatac catcaccctc aacagagccc aaccacagaa 2160 ttctcagcgc aaacgccaca aacagacttt tctcttggaa gcatcataga ccctgaatac 2220 gaacatgtgt gagacatgaa aaagtggaat tccagatgcg gtgcacgttc ggcttggacg 2280 ggccctgagg aatgtaacgc ctggcctgga ccacattcaa accggagttc ggccqtacqc 2340 cggagatcgt ggaattattt cccgagcgat atggttgcat caagcactca atccgtgcct 2400

acaaatgtgg gcatatctgc gagcgatgct agtggttgtt cgctgtatgt aactgcgtga 2460 ttttgacaac ggcctatgct tctcgtcgca aaagtggatt aaaggggtcg aatagtgacg 2520 acageggett ageegtaegg aateaaattt ggttteetgt acettatete tetgttteag 2580 ctggactagt ctatggatgg ggtttgtagc atcggccgca ttcggtagcc tcagggcaac 2640 acagetgaet tgtgegtteg teeetcaaat eettgaggge cagaateaaa gtgteategg 2760 cctctaccga tcatcgaggg gtggatcagg agcagacttc cctcgtgggt acgttgccta 2820 cacagacgcg ggtccccagc gcaggcgccc taatccggcg acaatatctg gggttggaat 2880 gttcacctga aattgtatcg atgtagaagt gcataggtca tacacatttg tgctgcaaac 2940 tgctcttcgc aggtcatgga tagatacagg acattctgat agaggctggt atatctcatt 3000 ccatagtatc gcaccgcaat tgattttgat ttttttcttt ttttttttt ttggttgaaa 3060 accetacetg ecegeetgea gacacataca atgeaacaag etaggtggeg tacteacagg 3120 tacacttete taaceaegge teattagage getgettgeg geettegtea ggacaggaca 3180 aaaaccacgg tacggtcagg tcaggttcgc ttgcgggctc gacgatttct gaccaggaga 3240 tgtagcatta gttcggatcc gagatga 3267

\&\U/ JJUJ	210>	3369	į
------------	------	------	---

<sup>&</sup>lt;211> 1594

<400> 3369

ctattattt cttcaggtga atcagaagac catgaagcaa gcttcatcac caactataat 60 tatacaccag gcagctgcgc ccttgccttt gcatccgggc tagatgctta cctcagatag 120 ttaataaggg gcaagtcgag gcagttacgg ccgaattacg gccgaactga acagaggggt 180 tgacagaccc tgagtgatac atcattatac tgctgcagat gtagcacagg ctgtggctgc 240 cttcaagcgt cttgtcagtg ttatccatgc gcggatacca gaagacggca gcaaggatga 300 caagtctact gactggatgg acttaccatg gcttgccgga gccaaacgta tatacagagt 360 tctcgttatg gaatcagctg tctcctggga ttggtattct cccctttgcc catgtgaaac 420 atcttaatcc tccgcctttc gaagtttggc ctagcccact actgccattg acatttatga 480

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

gccttcaaga attagaaaga acatctattg gggaggcaat cgctccttat tqactatqtq 540 cgcatagett gaccetteca actecacage geattteaaa acetaatget tattgegata tgtcgcaatg tgatccgttt tccgttctcc tggagcatag ggttcacctt catcttgatt 660 tcgcatggat caatgcccta ttttcatcgt gacgtcgact ccttaagtta agcttcagag 720 cagctgttgc cctcttatct cctgcctttt ttttgtcact gtcactaata ctatagaacc 780 cattgcagac tgcaagcatg attaagctcc tcatctacct tcctgtgcac ttcttccggt 840 ctaatgctca tagaccattt ctcctttact ccttttgatg cgttctttgc aaggaagtac 900 tgtgatggag cacatttgta accactataa agtgatggca ggagactaga aagtgatttc 960 agetteeteg aatgegttet tattatgaat agagtaatag eetgeettge tteecacaaa 1020 cctgtttgtg ttgttgattg agccttactt aatttccttt attgcatcta agccgtgcgt 1080 catatcgtcc aagttatata gggtatcaaa tgacagttta tttctaacct catgttgcaa 1140 aaaaggttaa gctgtgttcg ctgaactttc taccttactg ctgaaatttt tgtcatgttt 1200 tgcgagcaga aatgcaaacg taccactttt atatatcagt tttatcaaca ggcttatagg 1260 caagattcca aactaaattt ttgtttggaa atgggccgaa accttttttt aaacaactac 1320 aggagaagaa cctggttcgg ccttaaaaat ccctataact actcaacgag cgaaatggct 1380 tcgggacctt tttttttggg gaacatctgg taatttctta accaatagga accttgccgg 1440 cattttctat aaaccggtat cgtataaaga cccccttgca atttaaaaaa aaatgctgtt 1500 ggggaaactt ttaacctggt gattggaaaa ctctatctca ggagttaggg tcttttccgt 1560 ttccacaaac cttttttctt aaaacagtct catt 1594

<210> 3370

<211> 1653

<212> DNA

<213> Aspergillus nidulans

<400> 3370

tggattttgc aaaatggtca atcgcaaggt caatttcggc tttctgatcg atagcatctc 60 gcaacactgg tgagacatat gaataaatga cttcttgcac agcacccatc tccgcaagac 120 cctcgaggcg tttgatgtca ttctgcaaag cccgagtatc gctgggcgcg tccttttccc 180 atcttgcgag atgagagac ttggccaaag ctagtttgac tcgatgaccc cagacatcct 240

gttcttgttc gagagcaaga tgctccaagg tctttgcagc acattcgtaa tcggcctcac ctatcacatc attaatccag ctgagcctgg cataaggctg atgcttatgc aagaaccgag taacaaacga ctggaacttt ttggctgaaa acaggatccc tggctgcccc attgatatct 420 gacggccaaa gaaagcgtca gcccaggcgt ctccgaattt ctcgaaataa agggatattt 480 tectgtegag etegataceg teeggagtat etaegttggt aaacacaace ttgttttggt 540 cctggagctc aataataagc tccaccagcg cgctcatgtc ctgaaagctc tctgccaatt 600 cgatggcttc atttagttgc ccgatgccag ccagtttaaa tagctgccat ctccgctgtt 660 tgatgtgtga ctgcttggtt gcggaagcct catcgatcag cttctggtct tcttgggctg 720 agagccagcg gatccgctca gaatacattt ggcccattat ccgaaggtgc ctggcactgt 780 ttcgtgcaat tttcgcagat atttgttgat ctcctccgtc agagctggtt gaagtttgtt 840 gtatagctct gcagctgtca agttcgagat ctaataaatg cccgatttca gaatagctga 900 tgctctgtga agtccagaat tctggaagac cttcgtaatt ggtggttaaa accccttctt ccaaatatcc atctccaatt ccgaactggc tagcatgctc atcccgatat ctgaaagccg 1020 tetecaacae egetagagat aacteaeegg ettecaggat etgttetgae atteegegea 1080 ttttgttttg agggatttcc ctttcctgag gttttatcgc atggaaaatc cagggcacta 1140 tatgttccat tcgataactg tcaaacagaa accactgccg tattggatcg tctgtatcgt 1200 ccagctttgt tttgaacttt tcattcatca gtcccaaaac atgcgcaagg aatgtcgctc 1260 cactgctatt gcgtttcctg gcgctcgctt ccaatctcca tattgccctt tgagccgcaa 1320 gcttttccgc accccatagg agctcccacc agatccgccg atcaatgatt ttattctggt 1380 caagtaggat ccgagaaaga tcatccaagg cctttgagcg taatttcaga ttttgatcga 1440 tagatatggc cgctgaaggg atgaacttag aggtagaccg cagtagccct tgacagatcg 1500 ctagagtggc ttgctcgatt tctgggacag gaaaatccag atcgccctta ctggacaagt 1560 tcagtgggtt gcctaacatc gtaccgtaaa atacagcttg ctcgagttta tgctgagccg 1620 agattcgcgc agtctccacg gtttcctgcc cag 1653

<sup>&</sup>lt;210> 3371 <211> 597

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

-100-	2271
<400>	3371

ttgagcagct	tctcagcaca	aatggtaatg	ttctgtgcta	tacatcgaca	ccgctgaggt	60
gatgcttttc	ctctctttat	ctttggcccg	ctattgcata	gagacatctg	tttcgcccgt	120
ctagacgagc	gtgcaaaggt	ttgtacatga	gacatctgtg	tgtcgagctg	atagcgcaag	180
ctttctggat	tgttttcgct	ctttatcaat	tgtactctat	cgacacaata	ccagctcatt	240
ccttgcactt	tgaatgacct	attgggttgg	cctattgttg	ccttggatct	ataatgggtg	300
atacttgacc	aagccgctct	cttctgactg	cccatcttat	atgctcctat	tgtccaaaat	360
taccaaagtc	tcaaatttcc	accaattaat	attgctaata	tgaaagcagt	tcccgctaca	420
gcaacgtggc	tcaccgaccc	cgaaaaagcg	tcatgcaagg	ccgcctccca	cagagcgctc	480
cttcctgacg	tgtggagatg	acttacaatg	tgtcttactg	tgctttacaa	gattggtcca	540
gtcgagggtc	ctgatagcag	acgaaggtca	cgaaatggta	ttttattaat	atgttca	597

<210>	3372
<211>	2947
<212>	DNA
<213>	Aspergillus nidulans

<400> 3372

acacttcctt tttattgagc aacacttcat tggtatgctc tcgcaatatc taaagaaaca aggaatgttt ctttcggtcg ttttgctggt agataacgat gatgaaccca tacatcagct gggccattgt gctcgttgta gcaggtagcc taggatggta ctacagcgaa gtaaacacca aaccgaagac ctctgcaaag gccgttctag aaaaaacaga acccgtggcc cctgcaaaaa 240 agcaaaagcg aaaggcgaag aaatcccccg aacctgcttc cgctccagtt agcgagaagc 300 ctacatttga attcaaggcc cccgaggagg atgagattcc ggatgaggag attgacaaga 360 aggagetgge taageggttt geegetgtga agaatggeae tteateegee caatítgeta 420 gtggtgagag caagagccag aagaagaaga agagcaaggc tgctgctaag ctcgagccca 480 acaatggcga gcgctctgcc tcccgcgttt ccaccaggac ttcgtcaact accggagctg 540 atgctgatga tgacctttca tccgctggtt cccctcgggt gaacgccact gccgccggtt 600 atgtctctga catgctcgag gcccctactc ctggcgcctc cgtcctccgg gtgaccggca 660 acattgactc tagctcccag aagaagaagg ctaagcccga aaagttcaag gaagtggaaa

ccaagaagca gcgtcagcag cgtcagaaga acgaagcccg gaagcaagaa gttaaggccg 780 ccgaggagga gcgacgaaag ctacttgaga agcagcttca cactgcccgc gaggccgagc 840 gccgtgaagc caccaagtcg gtggctgcca acgccgctgc caatgcctgg gcgcccaagt 900 ccacaaacgg cactcategt tecteccagt etectcagee tgegeaggtt eccaaggttg 960 aactgctgga cacatttgag cctagttcaa cttccaccca gtcgcccgct acatctcagc 1020 aatggaacca agggctccct tcagaggagg agcagatgcg tattctcggt gctggtaacg 1080 gcgaggatgc gtggaccaca gttggtacca agaaacccaa gaagaaggcg aaaagcggat 1140 gaaagcgaag cgagcgtttc taaaagccag ccagttcctg ccgccccagc tcctgatcag 1200 cccaaggtca agataacgcc gacctacctc cctgacgtcc ttcgatccaa caaaaaggga 1260 cacceteteg acteegactg ggetgettaa atttgeegee atateetaat cactaceate 1320 atgggacgga agacatcgtc catgcgccga ggagactcct acaaaccgaa gaaaactctc 1380 cactaaggac tgtacttatc actttggatt acggcgtcgg gggtgcaaca ttatagccac 1440 tgcgtatatg gcattatggt ctgcttttaa gcagcttcgt cagagaaagg atttgaagtt 1500 gacaagtgac gcaaaggccc acgaagaaaa gaagaaaagc accagccaac gcacgaagaa 1560 aaaaagactc tcgtattaga ttcatgtatt ctctcgaccc tgttttgaac cctttcttct 1620 cccttcactg cacacatact tttgttccaa attggagtgc tcctcctggt ttcggccaat 1680 tttaggaaac ggagactttt ttatttctga ttttgtgtat tctacatatt tgtactgtta 1740 gtccggacac tgcgtcaaga cttggagagt gtatgatctt gaattacgaa taggcatttc 1800 tgttttaatt cttgggtcct ttgtttttgt cttattctgt ttcatatgca cgacttgcga 1860 acctcctagg gcagggtcac agatcggatg aagatcatgg cgtaccttgc ttctgtgggg 1920 tttgctcaat cattctgccg cgggctgtct gactactgtc tcataatttg gaagggagcc 1980 atccgtaagg aattcaggcc caaatcagct gtaaccacct ttttggggcc actttgacaa 2040 ctgtagctgt gagataaaat tgtagatttg gtgccaactg ctgttattgt atggtatttc 2100 catttgttat tatgaaagcg atgaagaatt gaagatcgac gaatggcgtc actggggaat 2160 ctgagccctg aaggctggca gccacggcta aaaaaggatt agcgcagcgt tccgggtatc 2220 gtggcctgaa agtcacaagt cacgggcctc gggcggagtc gcagtagaac tagtaagaga 2280 caactatica acatecaeee tetatigage etteatitae tittegiett tetiteteet 2340

<400>

cgcttccttt tetettett cccctccttc etagetaaat acaccggctg ggatttggtt 2400 gctctccctc ggtcaattgc atcaccaatc atattgttgt tecgagttgg accctgtact 2460 gcggctccca ctccccccc gagtcccttc gcgactatca tccatcgtcg gcctattgcc 2520 cgcgcaccaa ctgcctatat accacagtca tggcgcaaaat tcgtggcact gcaggctata 2580 accttggcca ccaaaatccg ttcggcggtc ccgcgagcgc agctgcaacc acgacccga 2640 gccccttgga caccatccgt gaacatacaa gcaagattga ggattggctg gacactatct 2700 cggaccctat caagccgtaa gtggttgctc gtcatgtt gtctgtttgt ctccaattc 2760 accgaatcgc tggcgtacct gtgagccgtc tcagaaattc tgacagctct gctgacaacg 2820 tgtcatttac tccaggtatt tgcccgctgt tggccgttc ttgatcgtgg tcactttcc 2880 cgaggatagc ttgcgtatcc ttacgcaatg gagcgaccag ctcgtttatc ttcgtgatta 2940 ccgcaaa

<210> 3373 <211> 1179 <212> DNA <213> Aspergillus nidulans

3373

gttttgactt ctcttacgag aacagcggac taaatccgct cgatgatatg gctaaaattt 120 cccgcgctcg atcgatggcg caagtcattt cctgaacctc actagcgacc tcctcgcgtc 180

60

240

gtgatgttat tgagtataga ctaaccgccc tcggacggtg gcttctttaa tttgtggcct

tactacagcg gagttagtcc gctatcaggc atgtctgtgc ccatgacgtt ggagaaatcc

ggggttgcac cgaatgcggg gaagctgctt gctcggctat ataggtcacc atcctcatgt 300

gttcctccat tctcactcat aggtatatat tctctttcag cacgtcatgt cgaaaccatc 360 aagtatttca gtcccacatt gaagaggtcg agaagcccgc tgtccaccat aatgaagccc 420

tcagtcaatt caccccgcag gagcggaaaa gactcatccg tcgcatcgat ctgcgcctgg 480

tcgtcacctt gggctgtctc tactgcatca gtttgctgga ccgaacaaac cttggtgcag 540

catctgtggc tgggtatgtc tcttgccgtg tctaggagac tcctgctgac aacctagaat 600

gcaacccgat cttaacatga acgcctccaa caatggatat agtataactt cccttgtttt 6

cttcattacc tataccatat tccagattcc ggcgaccgtt attatccgca aggttggacc 720

<210> 3374

<211> 2362 <212> DNA

<213> Aspergillus nidulans

<400> 3374

cccgaggggg cctccattta aattttataa ggccggtgat ctcaccccat ttgttacctc 60 acttccctgt ccaccgaaac gattttttt tatatcacta ccaaaagaaa tgccctcgca acaacccagt tacgacgtcg taatcatcgg cgctggcttc tcaggtatct acttqctqca 180 ccatctccgc atacttggct ataccgttcg ggtctacgag gctgggagcg acctcggcgg cgcttggcac tggaacaagt atccaaactg ccgggtcgac acgcagggat cgatctacca gctgtcaatt ccagagggtt tgtgagacat ggtcgttcag cgagaagtac ccctcgqccq 360 acgaactgcg cgggtatttt gcccacctga gcgcgtgctt gtggtcaaga aggatatcga 420 gtttggacgg accgtacagg aggctgtttc gataagccac aaagaaagcg gaagtggacg 480 gttgagacgg atgatggacg agtgacgcag tgtcaatttc tgctgtcgtg cgttggctta 540 atgacggaga ggtatgtgcc tgagatcccg ggactggaga ccttccaggg tcggatatgc 600 catteggeet ettggeegaa gggaggegtt gaegttgeag ggaagaagge egeegttatt 660 ggaacagggg catcaggtgt acagatcgtg caggcatggg gcaaggaagc.aggctcgctc 720 tttgtcttcc agcggactcc taacatctcc ctcccgatgc agcaggagag cctctcaccc 780 gaagcgcaaa aagccctaaa ggctgagata ccgcgcctat tggctgcgcg agaaaagacc 840 ttttccgggt tcttgaagga tcccagtccc catcgcacat tcgaggtctc gcgtgaggaa 900

cgagaggccc ggttcgaggc cctttaccag gaaggcggct ttgcgttgct gctcqqcqqq 960 tacagcgata tgctgctcga cgaagaggca aaccgagagg tatacgaatt ctgggttagg 1020 aagacgcgag cgaggatcaa cgatgcccgg ctacagaaaa tcctcgcacc agatgagccg 1080 ccgcatccga tggccaccaa acggtcgtcc atggagaacg attactttga gcagttcaac 1140 aagcccaatg tgcacctggt cgatctccgc gagtcgggct gtgccattgc agccatcaaa 1200 cccgacggcc tcgtgctgca gaacggcacg ttctacccgc tcgacgtgat cgcccttgcg 1260 acaggettta acagetacae gggeagtetg acceagatee eteggetgeg caacacatee 1320 ggcaccacgc tagcggaaga atgggcgcag gacggcgcga gctcgtacct cggcttgacg 1380 cgcagggggt acccgaacat gttcctgtgc tatgcgctgc atgggccgtc agcactaacc 1440 ageggacegg tetegatega getecaggeg eggtggatea tegaggeaat tegeaagatt 1500 gacgagtccg ggctgaccta tattgagccg acagaggagg cagagaagac atggaaggcg 1560 acaatcaata agattactga gatgacgcta ttccctaaag ctgactcatg gtatatggga 1620 gccaatattc ccggtaagaa gagagagatg ttgaactttc cggggggaat acctatgtat 1680 gaggagatgt gcttcaaggc gctgcagaac tgggaaggtt ttgtcactgt ttgagatcct 1740 ttctcctgat taatgactat ctatccatgt ctatatcaag caaaatagtt gacataagtc 1800 attttgtatg aggctggatg cagacgatcc ttgccttcca gcagtgggat accagagcag 1860 tatacgttca gtttggaaag gtccataggt gagacgaccg tagtgtgata agttcagatt 1920 gtccaggtcc agacttttga gagcgtaagg ggtgagcaag gcgcggaagg gattgcggca 1980 gagagcgagc tgcgacgatt tagggcttta gcaggtaaac tagtctgcgg taagggaggt 2040 ttcaggaggg acggggaaaa ggatcacgtt tcaggttggt tagtactctc tgaggatatg 2100 gccagcatct gtcctatgcc aattagtcga gttgaggagg tgtgtgaagt ggcgctatgg 2160 cagettetge etgteatagt gggatggaet tggeeettge geeteteeag eettaggegt 2220 tecateaege gttgteaege getgttgagg aageeeatge tgagatateg agggetagtt 2280 gcaatattgc accggacggt gatacagagt ttgagaatgg agcgttccgc ttttttgtqc 2340 cctatatcag ccctctatat aa 2362

<210> 3375 <211> 1123

<212> <213>	DNA Aspergillu	s nidulans	"Ya	•		
<400>	3375					
caatacctac	cagaataaca	tacatggcca	ggttgtggcg	ggtgacgtca	ttattttggt	60
ggtactggaa	atgtacagag	tactgaagcc	aatatgacta	ccaagatgac	cgagcgatgg	120
gccagccttt	gcataggaag	tagagaagcg	acatctacca	tcgtttattg	cctgcctgcc	180
catcctgacg	tcataagaca	tggagcgcca	cacggatgac	gaaagtacag	taaccagtac	240
gggatgagat	catatgagat	tatcgggttt	caagaaaggg	ggctttactg	aattttgtac	300
cctcagctgc	aaccatatag	gacgtcatgt	tgaagtaccc	cataagcgat	cttttcccgt	360
gacatggaaa	tgtgacgaac	cgggttgcgc	tattgcggtg	tatcaaagag	aaactgattt	420
ccgtggattc	ccgtagagca	atgatggtgt	ttgaaatagg	gactcttggt	tgcatgtcac	480
tgtcaacggt	gtgaagtcgg	cagataacaa	tctagcattg	tgtattaatc	agaattgtcc	540
actctcgcta	tgaaatagtg	aaagaggtta	aagtgactag	agtagttctg	aaagagtctg	600
cgccaagacc	tagccttgaa	ttatcacgtg	actgtaagtt	tttcgagcg	gtggctgcca	660
gtccctcctc	gatcgcgagc	gggagtgagt	gctaaaaaag	aagtagctcc	agtaacaccc	720
atcatccaca	cgcagagcac	atcgaaacta	ggcgccgctc	tgctcacttt	ggcttcgatg	780
tttttattta	ttctctagct	cagtcttttt	ctctcctg	tcgcatcttc	atcaccttgt	840
ctgcttcgcg	aatcgcgacc	ctgccatttt	gaaggacgga	ccaagcgcgt	gcgcatttag	900
agccacagtc	cgcaacgact	ggaaatatca	gggaatctgt	ttcttttca	acatatactt	960
catatctcgt	cggcgacatc	gcagttttct	cagctttttc	gctcccgaac	gggctcgcac	1020
ataacctttt	tttccctctc	gactccaacc	tcgtcgcgac	tcagtttcgc	aattgtcggg	1080
gcaacaagtc	gtcaatcgcc	ttgattatct	accgtgagca	gga		1123
<210> <211> <212> <213>	3376 1125 DNA Aspergillus	s nidulans		•		
<400>	3376	t 2 2 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	tagatast			60
				gctttctctc		120
yayaatatgC	ayyaygyttt	ttttegggte	accgcccgtt	ccttgatagt	ttttcgccct	120

gagcttattt	atctctgact	gtcgcactgc	cctttgcgca	tcagaacccg	gttacgtgag	180
catacaaaac	tgcttaccaa	ttgcggtgta	gggactctct	ccctctgtcg	cagttatggg	240
tagctggagt	ttggtggatt	tggaccgggc	agtgtgaacg	aggacatatg	aattggtttc	300
gtcagatcgg	cggatgcgtc	agatgcaggg	gggaaggcta	tctttcgcgg	aagacatctt	360
ctaggttgtt	acgaagagtc	taagatcaaa	actgcgtgat	taaatatttc	cagcagcctc	420
tggactcgaa	ttttcaatca	cattccagac	gggctggtgc	cttgttctct	aactgctgcc	480
ttccacatta	caatactagg	cttggcacgc	tgacaaacat	ctgacatttt	atgaccagta	540
tcaggatatc	agcttggaca	actaccaatg	ttaacactat	tttgcacatc	tgtagacaaa	600
atagtcctgt	ttctatataa	accgcctatg	tttagatggt	cgtcatcctc	tcaagtaaat	660
gaaatagccg	aaggtggtaa	atattacttg	gcaaaaaact	ttggggtgca	aatttttaa	720
gcccgccaag	cttttccatt	ttgtaaggcc	tcagggatgt	ttcaattgga	gtaaaatcca	780
ttgatatcgt	cagcgtccag	ggttaatgat	cactgaatgc	tagcagcttt	cttgagagat	840
aaccatgatc	tgcatgagta	tgataaattg	tagaggtact	gaggagcact	actccagcgt	900
tattcaactt	cccaatccgt	tatattatta	tccacgccgt	atgtactcgt	cccgaatgt	960
cacgctccaa	gagccccaca	caatgctgag	taagggtcgc	cttgctagtg	attgaaacgg	1020
cgtgaatcat	actacagcaa	cccccaagcc	gacaggaaat	gcgtagtggc	aaaatatgga	1080
gagtgttaac	ccagcgttag	gagtgcgaga	gtcggcggcg	ttctt		1125

<210> 3377

<211> 542

<212> DNA

<213> Aspergillus nidulans

<400> 3377

aaagtatgcg aatctcctag cccaggcccg ttatactcaa ccttgcagct caatgctgac 60 ggtaccagcg tcttgattcc caaaacagcg tttgaagatc aagcagcatc accgacaacc 120 ccgaccccgc tctttatcac agattgggaa ctcgccagc atggaactcg agctcttgat 180 ttagggcaaa tgatcgcaga actgtacatg ctcaatcact acaaagatac tgatgcggga 240 ttgtgggtta tagaaggttt tttacagggg tatgggtatc agcatatccc ggtaaagatt 300 gccttccgaa cgctcatcca tgtcggtgta cacttcattt tctggggtag tacaacaccc 360

ggatggggga gtcaggagca ggttctcgat ttagtcaaac ttggtaggga actggttgtc 420
agggcgtggg agacggatcg gacgtggttt gaagggaaat tttgggaggt gttttcaagg 480
ctaggcctag gtggacacga cggactgtca tcattcagca acaatgagca gaagatgtcg 540
tc 542

<210> 3378 <211> 4077 <212> DNA <213> Aspergillus nidulans

<400> 3378

attttcaacc tgtgaaggaa gtatgctccg tagctgcggt atagtacagg caacctacca atcgcgtagc atcctcacag agaccagagc tggcagtcga gacttgaagg attgcgtgcg ggacagacaa aaaacatgaa ctattccgta ataattacac ataagacgct tggaaagagt 180 gaacaagcca cggaaaagga atatagcggc aggtgaaact ggacacgaca ccggagattg 240 ccttgaggct gactgggaat tctccatatc acaagaagaa aaagccaaga ttgcagtcca 300 aggcgtacaa gacggtggat gagacgttgg aagttaatac tttgatggat cacagcgggc 360 tactgcggcc gtacgagaga tggaaacaaa cctccgcaag ccgtgcctat tatcaatatt 420 attgcatcgt gtcttgaact ttccatccca cttcagatcg tcatggacac aggatgccgg 480 gacatettte tecatetgag tategttteg teggeegtge geetttgaag egateeaagt 540 gaataagcgc cagcaaatga cactagccaa ggttccagat ataatgacag agtctggtat 600 aatgacagag tetggtgatg ataatgaega teagteatgg tatggttgat gagagtgata 660 cgcaactcat ggatagatta gacgataatg attcctaggc atcttggcca attggcgata 720 agtggcactc gcgctccaca gcctcggagc acgtatcggt gacttgtttc tacgttgtgt 780 tetggaacet ggaacageeg geaaacecat gttacaacta tecaggeggt ttegttacea 840 agcgggctag taacgggcag taataatcgg gcgatactcg atacactgaa tccatcagac 900 tatataatca tggtcagcct aaaccataaa cggtaactgg ctgcttgttg attggatctg ctcctcaatt tcgacgcctc tacaagttcg acgcaagact gaggtatctc gtaaacttag 1020 gageeggega tetttatett getgtttgtg tgaaggeagg etegeeacag geteagetga 1080 ggcaagagaa agttcgctcg gacagctcag atcaggacgg ggattataaa tgtatcaggc 1140

tagcagtgta ttcaggttag cctgccccaa tgttgttgtc ttcacccgcc cgaaatgatc 1200 acatgatcgg ctctatctta atagaagcag ggatcaatct ggaacaatcc gttccctggc 1260 ctggctgagt ttcccccttc agagcaagcc gcagacgaat cttggagacc taaacttgaa 1320 taggaaatag tagcggaagc cgattacgaa gacttgctaa ttatggccga cactagtacg 1380 gaatagtaag gagcagggct tgaatagtgc aagcgagttt gcctacaaag cggcttccag 1440 ggatgggacg gatccatgag actcccgaac gcatttcatg ccactcatcc ttcaactatg 1500 ccgtactcgt cctcaatcct gcccaggtgg ggaggcagtg tttctttcaa gctgcatgca 1560 tcaacaaagg tgtttacgac cgtactccat agattagcgc tattgcaggg ttggcccgaa 1620 aatgctcgat aggggaagaa acccgggaaa cacaattgtt aaccaagacc aggatggttc 1680 tgggattcca ggcctgtgga attcttccct tgcacttctt ttcacgaagt tactaggggt 1740 gctgtgtcgc tagccgctgt tgggcgacca gacagatgag aggccgtatc gagctgtctc 1800 ctgagcgcat cgatcgtctg cattattgtc ccttttattg aaccacttag aagccaacac 1860 ctgcactatt aatcaatcag gttgtcaaca tcgactcctg aactctgagc atttagcgct 1920 cagctaagat gctcgatgct gaacctcttg ttgattgtag cctgtaaggc gtaattccgc 1980 ggcccatggc gaaggccagg attctgcgca ttcgttggaa gagcttgtat ctcttacact 2040 gagttgactt ctattgtcac tgaatgcgga gacgtaatgt acccagacgg tccagagatg 2100 aaaacatcga tactggtcct ctattgcatc tctttttcct ggaacagcta ttgagacgac 2160 tgaagcttat agggttcagc agcgtccaag ccgacgatta ttgattattg gcatactttg 2220 tegacteate ageatgaega tacetgtace gegtgtttgg gggtttetee ategeaeege 2280 cagcetetta geateetett aettegeatt eageetttea ttaaattggg atggateata 2340 tccgacccaa atattcgagg ttgcaggttg tagatagagt ggtgtatgcc tgagcgagaa 2400 gggtggcccc gaattatggg cgagttggag gaaaggcagc tcgaaggcta aaccgaaccc 2460 ggttacaatg atacgtcgcc aacgagtaat atcgcgtcca ggtgcactag ccagcgacct 2520 tgacgtgctg tgaccgctgt gaccgctgtt gggcagagaa actggaatca gcaactgcac 2580 cttgatggat cgtcagctgg gtggctcttt gtgacagacc cagccccgat gatagctgag 2640 ttactcggcg gttatcccac tgaagtttga cctttgatta gcctcgcgac aaagaacagg 2700 attgggccag tcgttgcaac tgtgctccga aaaagcgggt ggtcaggatg aggaattatg 2760

gatgctgcag taaaaggtaa tttgtgggct tggccaatac acggaacttc gcggccagag 2820 ceteageteg gttegaceag aggtgaatee ecaattegta caeaeggeta gtettgttet 2940 ttctgcgcgg aaaattgtgc tcgtttacct cgtcctgttt cgcccgggtt ccaaggacga 3000 agggcgcttg ttgtggctcc agcgtccaac ccccagcagt cacaggaagc tgaacgcggc 3060 gatctcattg gactgttgtc ggctgccagt ttgcttacgc atgcgaaact gctcgtaaag 3120 ctgataccca tccatgctcg cgctgtgtcc agaatccaga tgccttgcat gcaccagctt 3180 atgacctggt ggtctcactc gtgcagtgga taggtacttc gtctgtgatt gtgagtcctc 3240 aatteetace agatttgete cacetgeaga tggegtetee tgagegtttt aegetettte 3300 ccccctactg tccaacgcca atttttctct gccggcgtcc agatgatgat tattgattgt 3360 ctgccgccta ccgcctaccg cctaccgcct accacccagc ctcttctgaa gtcctggaat 3420 tctggtcata ctgtgacata ttttacccac cactccacgt cgtagcgtcc caccttgctg 3480 gctgtaccac taagccggcg gcctgcctcg cctcccagcc aaacttcctg ccaagccgaa 3540 gtaactggta accttgtatc tgggtctcgt aacattcgat aagattcgta tgattcgtat 3600 gattegtatg attegtatga ttegtatgat tegtatgatt egtatgatae gatagtaega 3660 ggctgttgac gcggacgacc aaagtcgacc aaagtatgct tgcggattgt ggttgccagg 3720 attectetga titticigat tictetaate ectetggett eegegagete gggeteggtg 3780 atcaacagca ggttagtcgt gctgagcaat gccccggccc ctccctgggc tggtgtcgcc 3840 cccttcctgg gcgaggcagg caggccacgc accgaaaagg aaagaattcc aggtggcccc 3900 ggcaccagaa ctccaggagg acaccagcac agtgcaccac acaatggtcg caatggtcgt 3960 tgcaacttca aataattcta ataaatgttt ttatgtgacg ctcagatagg cgttgccact 4020 attattggat cgccgatggg gctgacagag tcagttggcc agactaatca ctctcag 4077

<400> 3379

gagtagccct atgatcgcgg acaagggact cggcatccat gtcttcgagt tgattgtgca 60

<sup>&</sup>lt;210> 3379 <211> 3166

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Aspergillus nidulans

gccactgcgc gccctgaaga tacagctcgc tgctgccgca ccggtaattc tcgtcgtgga tgcattgaat gaatgcgatg acgcagtcca tatcaaaact atcatacggc ttctctccgg tgaatgtatg aaagagatta acttgcgagt tttcttgact gcccggccag atacagcggt 240 tegaategge ttecateagg ttgeatecaa agettaegae ggeatgatae tgeaegaggt 300 tgcacaagag actatcgacc atgatattcg cgtagtactc gaacaagaat tgcgcaagat 360 caaacagaac tacaactccc tggcttcgtc agcagacgct ctcttagcgg ccgactggcc 420 aggttcggta gctatagatc ggcttgtaga gatcgcgagc ccgctattca tctctgcggc 480 caccatatgc agggtcctga gcgattcaag gttcttaccc caacatcaac tggccatgtt 540 gctagagttt cagagtgcca gccacgcttc taagctcgag gtcacgtacc tcccggttct 600 ggaccagata cttgtcggtg acctgacgag gcgagagaaa gaatacttga ccggggagtt 660 ccaccgtgtg tgggttctct tattattcta gcggagcccc tatccattac tcaccttgcg 720 agactettgt geattteaag ggeeegagta gagaegagtt tggettetet acatgetgtg cttagaatcc ccgcagacga tggccctgtt cggcttcttc atgcctcctt tcgtgatttt ttgctcgacg agcacttgct tgagaaaact cctttggcta ttcatgctcc aacagtgcac aactacttgc tgcagcattg tettetttge atgtegagaa caaccagett gaactegace 960 agctgttcag aaaatatatg cggcttggcg gcgctgaagg gcttagattc atctctggag 1020 caggatatag ttggcaggat attgccaagc gacctgcgtt actcttgttt gtactgggta 1080 taccacttga aacaggcaaa taggtcaatt caagtcggcg accacgttca cagctttctt 1140 caaactcact ttctagactg ggtagaggcc ttgggaatcc tagatcggcc ttctgaaatc 1200 ttgcaggcgg tgcaagttct ggtttcgctt gttgaaaagg tgacttacca tttacccttc 1260 ctcctacatt ccttatctcg ttcccatggg gctgattaag acctagacga gcaaagggaa 1320 cgtactatca gagtteette acgatgeaag acggttegte cacagecata aacetgteat 1380 tgagcgagct ccgggtatct tgcattcctc cgtccttttc ctgccgctac gcagctcaat 1440 ccgccaaaac tttatctacc attgtccggg ctggatttgc gccttacctg aggtccccca 1500 ggattggggc cagcccacgc tgcacgtgga cggctttgct ctcaactgtc tagcatttgc 1560 cgaagatagt agcaagctgg cttcagaatt cagagtatgg aacgcaattt ccggcgacgt 1620 cttacatgca gttgctcgat acaaacctaa gtctacactg ggtccaaaac atgactatca 1680

atacggcatc aaggctcttg cctttaaatc cgctcacgaa cttgctatag tgacacgtgg 1740 aggecaaete caaagettea ateteattae eggtgataga atagaaegta eectagatte 1800 ggctgtacat actgcggtgt tctctgggga cgcaaaccgg ttagcgttca tcggatgctc 1860 gaateeette aaagtateae agacacagee aacegateea aeggttgttg taatagacaa 1920 cgtctcaggc caagtcattc tccggcttcc caatatgggc taccctctgc tgagtttqtc 1980 ctcggatggg agtaccttag catgttgcgt actgtccaat gccgaaagca cagaaactgc 2040 tcatgttaaa gtattcgacc ttacaaaaga gaatcttcgt tcccatgtgc gcgcacccaa 2100 ggtgatctcg gttccattca tgtatgtgtc aatgataact ttgtcccgca acggccaaaa 2160 gctcgccatc tttggtgaag aagcaaaggc gcccgtagtc ctagttctgg acatcggcaa 2220 atacaaatac gagcgctttc tgcccgtatt ggccaaagta tcatgcatgt ccttctcacc 2280 cagtgctgag acacttacaa tcgttctgga aaagaaggag ttccatctat atgatctggc 2340 cacgggcgag gcgcaaatga tacgagagca ttgtcgccac gattttgttg tctttgcgcc 2400 ggacggacta agaatcgcca cagcttcaag gaaggcgaac gggattgcgg tttggaattc 2460 tttgatcaac cccgaaagca ctctgcggcc gggacagcgg ccaacaagct ctcccaatta 2520 tttgtctgcg atatcagcgt tttcatagga cggctcaata gctgcgacgg cacagcagag 2580 ccaaagaaac acgettetae ttgtggatgt ttatageaag caaattetge ataaattaca 2640 agcgtacggg gtgcccgagg ctgttgcgtt ctctgcggac agaagagtcg tcgcagcgaa 2700 aacattetta tacgacaata atgaagcaga taaaagagac aaagaaggag acggaggtaa 2760 attcacattt gaggagetet ttgatgatga cattgtegtt atcgagaaag acttegeegg 2820 tecegacaac eggeateegt getggetgga ggtgtggaaa gttggeteaa attegacegg 2880 gaccaggcca acaccgcaat tcaagaaggg gttctcaatg gaataccgcg aggcgatatt 2940 tgcagtcaac gctactggga cacgggtggc ctttgcactt tcttctgtcg ctggcatcgc 3000 acgagatgcc gacttacgca acgccatgat cgtggaggaa tgggatgtag tcaacaggga 3060 actactttgc acgcacacaa tagaccagtc cttccggtgt tcaagcttga attcacaata 3120 aaacgggccc atattggccc ttttaaattc attggacttt ggcctt 3166

<210> 3380 <211> 1521 <212> DNA

<213> Aspergillus nidulans

<400> 3380

ggacattttg atagacttga tctggtgaag tgttaagagt ggaaggttgt ttttgggtga 60 aaaagtagct aaattataga tagtatgggg aaagccgagc cgaggttcga gaccccgcag 120 ccgtgccaga cactcggtta cggcagatta atgatcatgt ccagaatggc atcatggtat cgatagattg atteattatt aageacagee ttagacatag ataacacaac cagtggttgt ctcctcgacg gtgcaccgta tatgcaaggg gcttatgctg ccgtatctgc gcgggagcgt 300 atagttacag ggtcgggaaa atcatgcata ctgtatactg tatactatat acgaggccta 360 ggcagaacta cagctttgac ctgtcagtct taatagcccg atcaatcagc tccatggcct ggtaaagctc gtagtcgtgt tgtttaggcg ttatgacctg aacactcagc ggggagtcca ggtatactgt ccgatcgacc gttttctcat tccctaggta aagtcagcaa ttcaccattc 540 ttctgagtga tctagaaaag ggaaggctta caaagttccc ggttcgcctt atcccagctt 600 ccaataacac gtgcctccat ctcctttccg ttttccagat cgtctctgcc aaagtttcgg 660 accggaacag tcccagccgg gtagtccaaa agcacaaacg aagacgtata gccgaccgcg 720 ttgtaccgat ccaactctgg cacaggatgt ggcgcaacag ggtggatgat cgcgtcgacc 780 gtttgctcat gtccggtact accatacatc cacagttccc tgcggagttc aagctcaaca 840 tctcctcggg ttgcctgtag ctctgccagc tgcgaaagaa gaagcggccg tccccgtttt 900 gtgcggcctt taagccaagg gattagtgtc tcgccagtgc tttcgacaag gtctagcatt ttaatgccgc catcgacgcc catgagacgc ccagctaggg cttggcattt gggcagggct 1020 ttcgggacgg gtagctggac gacgttgact cccggtgtcc gacggagagc ggcggcgact 1080 tegttaagaa eetttgaaat eggtggtagg ggttegaeta teecatetga eggaaggaeg 1140 ccaatagtaa tcggtctaga cttcctgccg aaagacgaaa gtggtgacgg ccaagcaccc 1200 gggatacaat cetegeegaa ceattgggee etgggaatga ggtgagteat gaeggeqtta 1260 atgtctacga cggaatgagc gattggtcct gcgacggctt gaatcgagat ccgccctttq 1320 gctacgggct ggccgtctgt ttgcccgcca tatggcacac gaccttgact tggtttaaac 1380 ccgtacaagc cgttgcacat ggccggaaca cggatggagc cgccaatatc ggttccaaag 1440 ccgatcatgc tgccgcgaag ggcgagaaga gcaccttcgc cgcccgtcga tccgccggca 1500

gtgagctggc ggttacgcgg g

1521

•						
<210>	3381					
<211>	893					
<212>	DNA					
<213>	Aspergillu	s nidulans			•	
<400>	3381					
aaactctact	aaagggatcc	acaattctgg	aacctgatca	ctctctggtt	gctttcgctg	60
aagggtaatg	agaccaaccg	cgaattgtaa	aagattcatc	caatacacta	tcttcgtagg	120
caagcccatt	cgcttttccg	accttggctt	ttcttgcttt	cgcccgtgct	gaggagatga	180
tttcgtataa	cggaactatg	aatgaggaaa	ttaagggcag	aagtgacgaa	gtagcgaatt	240
ccaaacgcct	gccatggtct	gacagcgata	tcagggcttg	ggcgcgggct	gggataacat	300
cgggctcgga	ttcagatgct	atggagtcaa	aaacggtgcg	ccgagctgcg	ggggaaaggt	360
cctgtcgagc	tgagagggac	actagcaaaa	gggagccact	gcgtcgagcg	tcgggagaac	420
cttcatggag	taaaaggtgc	gaaccagctt	cccagagacc	gagagcttgc	tccgggtata	480
ccactgaagg	gccttagcca	cttgttccgc	ttcgtcacag	gcatggccta	gattctgctt	540
ctgcgccagt	aacttgacgg	acgtctcaaa	atcccgaccc	cccgaagcat	ccgaggagct	600
tgaaaccaca	cttccacgat	gcattgagtc	aaatcctgat	gcgttccaaa	agcttgtgtg	660
tccatccgtg	tcgtcgtgaa	cggagttgct	gctgtccgac	aatggggttg	cgggaaacga	720
tttcgcccgg	gaagcgctta	acgacctgaa	aacgtccgca	aagctagatg	ttgagtattt	780
ggagcgcggc	gggaatgaaa	catcgtcaga	aggcatgcgt	cctagtggac	agagagtata	840
tacgtgaaat	ccgattgagt	caacggatta	tataagaatc	tggataagag	cgg	893
<210> <211> <212> <213>	3382 2187 DNA Aspergillus	s nidulans				
<400>	3382					
ctgcatgcca	tccacgagca	gtacagtctc	tcaccctttg	atttttcaat	cagtgctgac	60
atgcctagtg	cgccattcaa	ggtagactcc	cgaaccatgg	acacattgag	ccaagcaggc	120

attgacggta gcagcatgct tgaccaaaaa ctcctatcaa gaggaaaggt gccaggctca 180

aatcaatgcc ttgtatgaat gctgcagtgc tttctacaaa gaaaaaggag acgacgcgaa aactcctagc tgcccgaaac cgaatctcct aaaactccgg atgaagcagc gcgaacagga 300 agetteataa eeeteetaaa aaceattttg etgetgteea gataaeggea atgeeegtta 360 ttcgagctgc tgtatatacc gaagttaaaa atccaccgca tagttgaaag cggtgaatgt 420 gctgtaacaa ttcctttgct ttttgagctc ccatgtaagt taagagctag actagttgta 480 agaactgctg gattgttcta agacaatctt gagcacgcga gaggccgatt gacctgaacg aagattgaag cgctcgttcc gagactctaa tgattgccta attgacattg aagaagaaaa 600 gaaaaagaag aaatcggtca gcagaaagcg cgggaggatt tttatggcgt gaaggtctag 660 aagctagtet aetteaggge tageggeagt eggeeaaaae agegegetgg geeaaegaga 720 attcatgcgg gtgacaactc aaaagaggca gaaacactgt cacgcagctt tattctgctg cttaccagte cattgetgge aaactgattt tttactattg cetagettat ggeteeegtg 840 agtagageeg eegggtegge eggetetgtg teeggetteg egteatetat tgaaegtaet 900 gatgaagcta gaaatgaacc tcgcggacgc attactcgct aggatggctt cttacaacag 960 gaccagcggc aaccgaacaa taccgaagtc atcgaaattg acgacgatga cgacgaaccc 1020 atggataatg aagaggagga gtacaacgaa gatgaaatgt tagaggtaga agatgacgag 1080 gacatggagg aagaggagca agaactggaa gaaaatgcct cagtagaaga tcggaacggc 1140 agcgaatcac ccctgaacct agttggagcc ccgaatggcc agagtatgtc atttcaacat 1200 gagactgaat atgcttctga ccgcgttata gacggaatcg acgtcactgc ttccgagttc 1260 ttcacctcag caggcgcaag gcaggcactg cacccacttc gccggactgc cgaccgagtt 1320 accegecaga tegaagettt egeegataaa ttggateget ttaaacaaaa ggetaacegt 1380 gcggacgaat ttcagaacta ccaggctgtc taccagttgg tgaagggatg ccaaaccatt 1440 gcgcaggacg cgattcagga tctttccaaa caaaacacac ttaaaagagc gaaattggga 1500 tggggcttca gtaacagcaa cggcacgagt gacgctaaaa ccgaagaaga gctgcaacgg 1560 ttacagctag aagcaagtac ttggcagctt ctgctgaacc tcgtcagtgt gacgaccctg 1620 ctagtagage cagetteeta caagegeaag agaetgeatt teaaaegete categgtatt 1680 cgtcagatcg cgacatctgg ggtcagttca tgaaggcgga ccaatatgct gtggaatgcg 1740 tgattattat gaaatggttg gaacaaactg cgcggtcttc cagtcaggac atcgactccc 1800

<400>

3384

tgatctcaga attagagata caggctgaga gaggacaggg ctcttggact catggatggc 1860 tgtataccaa agagactatc aaggggcaga agcggctacg cgcctggcct caacctctgg 1920 aaccaaacga cccagggatc acggcttcct tactgacttc tgagcaatcc gaaccgctgg 1980 taacacagct agaccccgat gcagtcaccc gccaaaaaca gaaccttcag agaaaggacc 2040 aattttacga gcgtgctacc tggatgacgt gctggaaaat gcttcgacag ggcgaggact 2100 ggactaagat taggcagtgg gcgtcagacc gcctggagca ctggcgcgca gtcagtatct 2160 gcgcggtgca gcattataaa cagtcga 2187 <210> 3383 <211> 568 <212> DNA <213> Aspergillus nidulans <400> 3383 ccaaggcctg gtgcgcgttt tggttcggtg tccttgtgac catgcaatcc cccgtcttga 60 cattegegae tetegteate aatteaattg ggtacteeca acteeagaea atgetgtata 120 cagctccctc gggagcggtg caggttgccc tactttggat agggatgctt ctgtgctata 180 tacttecaag acagegeace attgtegtgg tteteetetg catecetece ataattggga 240 atatecteat getegteete eeactaagtg caaggtgggg tgtgattgtt tetgettgge 300 tggtaagtee etgttttaae atecetatee ateceetaae teeetaeeee etecteette cacgtaaatg gtttcttacg ctaacaaaat tggtaacagg cctcctgcat caccgcttcc 420 tggtccatcc tcctgtcgct tgtcgcatca aatgtaaaag gcaacacgaa gcgcgccgtc 480 gtcaacgcca tgtttttcat agggtattgt gccggctgca ttgcatctcc acaactttgg 540 acgcataggc cgaagtcctc atgggatt 568 <210> 3384 <211> 899 <212> DNA <213> Aspergillus nidulans

ccgttctcct tataggggtc ccgagcagct gtgttcgacg cgggcatgtt gtattgcttg 120

60

tacgaacgag atatccactc attatcagcg ccagcatcga tgagtttcgc cttcccgcca

agaacagtcg acaatgccaa gaatgctgcc acgctgctgg tggttatgag gttatggcca caggcatggc cgatctcggg caatgcatcg tactcggcgt tgaagttgat cagacggcca cccgagccgc tctttgcttc aaaggaggta ttgagaccga acgcgtggcg agtgaccgcg 360 aagccctttt cttctaggaa atcgcaaatt gtgtcatgtg ccctacgttc ctcgtatgca gtttcagggg tagaccatat ctgatgaata tgtcaagttg ctacgatctc tgtggcctgc aggtatgagt agaacagcca ccttttgggt gaaagtgccc aatgatgcaa ttgcagactg gagegeette gtecaaggae geeeteactt getegatggg agggtteaga ategeeatgg 540 cttaacacaa tgtaagtgga tgcgatcttc tcgcggagct gagactggga ctgaacaggg 600 tgtcgtccca tatatgagtg gaggcgggat aggtccgcat tccccgactc gcgtacgttg 660 ctcctgatgg acggttggag acagttcggc agtctaatcg gtactcgaat actatctcgt aatgaatcat gggtgagata gaggcccacc aagcgccgat aacctggcag ccaggacgcc atagatatet etgageteae gaetgegteg gttagtgatt eeceagaaaa caacaatttt 840 gcgggggaac tgatacgctg tgcaaaccat ttagagagac gccttctgaa tggttgttg <210> 3385 <211> 1368 DNA <213> Aspergillus nidulans <400> 3385 atacaatgcc gtaggtttgg cgacaatgtg gcgtttgtta acaactgaga gtgatcatct 60 cacttttcat cagcggggaa gtgaaagttg gagccaacct cgttgattga ttggtagaat aacgcactgc caggcaggca gctaaacata tctaccgaca gctccatagt tgggtaatct 180

 aaataatata ttatagtgct ttttctgcgc tcccccacac tattactgat cagcttgcat tgcatgtcct agatttgagc ctccaggtta acaagagaat gaaatggtat gagatgatat aatcggccaa gacttcttgt atgtactctg agtatagctc attgtaatgc gagaaagtac ttttgtctag tttcattgta tccttaaagc tagacgctct ccttgtggta attcatctct 840 atatatagtc cagcttggtg gcatcttggt gcaattcatc gatgcatctc aaaactttat 900 ctccagcaag caccgataat ctatacagta agatetttge egtaacetge atacgaetee gaacctacga gcccaattca tgcagagttg caaactatag cagacgccag ccacatcacc 1020 caccgcatca teggtgeate gaggegatgg egtegatatg cagecagtaa ttagtgacag 1080 acggaatatt tccccaaaat cgcaccaaag tgacataacc acccatcgtt gatggtggtg 1140 gctgtagcga tgcgatacag gacaaattta cttgtggtac aacctgtagc cctaatcttg 1200 gatgegggcc gtgactgacg tcagacccgg ccttagctgc caggtgtaat gtggattcta 1260 cacaatggat cggctgcatt gtcttatgat tcgtcgtata ttctccgaga agagtgtgtt 1320 agataacgag actttctgtc cacattccgc gctgttgacg atgggcgg 1368

<210> 3386 <211> 1284 <212> DNA

<213> Aspergillus nidulans

<400> 3386

ccctgcattg ccctgacact tggaacattg atataccggt ccctgaatca ccttcgacgc 60 cgcggctggc cgctcctgtt aaccagaagg tgttttttgg tcccgaattg ccacttcctc gttgcactta agcctctctt gcagcattgt ctggccccta cccagcccaa aatctccgac ggaatteteg actggtteet eectegeacg gtatetetge teeacgaege tteacggeet 240 cacaatcgat tctgcgccgt tcgacccccc cggcgtcctg cccgcgatta tgccgtcatt 300 cacgaccgac tatcetteec agacggegac agetacaget acacaccete atteattegg 360 CCCgcccaa gacagaacgc acgagaaaag tccagtaggg aacacttttg tatggacaaa 420 ttggcccaat ggcgactcta atcacctcga gactccatcg gaccgcattc tcgctaatgg 480 tagtactact ctctaactgg accccgatca agtgcaagct cctacaatcg agaattcctg 540 cagtccaaag acgggagtct gcattcgtta ggaaatacat ccgctcggga acagagggag

gggaggccat catccattac aacggacaga gagcttcccc ggaagtcatt tgatacgggg gtcggctcgg caacaacgtc tattgctagt catcaggtaa atggggcatt gatatgtcac aaacaggtta acgggaagca catggttaat ggggattatt cgcgaccgtc cgttgatgag 780 ctggtctgct cagacacgac gggaaatact gcgacagcgc ggctgtcgac atcgcccccg 840 gacaacagtg gccgcctttc tccagaccat ggcagcctgt ccccaactca aaaaggcact 900 tatcggcact cgtctccccc gatcgccgca ggagtcaagc gtagcaacac gcaagactcg 960 gctaattcta gcattcgaca gcggcatacg ttacaagttc cgagaactac cagtggccgt 1020 cgaagtagtc gtgatcagcc ggacgacgtt gcgtacagca gcggccgcct atctccgaca 1080 gcgggagccc gccgttcgtc tcttgggttg gctcgccgga ccaccaggac gaatcagtcc 1140 gaaatcttgt ttgatgaagc gaatccggat gaagatgcag cccgttgggc ggaagctatc 1200 aaacaaagga gagcgtcgag aaggagacgg cgagacgagg aagatgatga aagagttgtt 1260 gtggaacaaa agttgatcga aacc 1284

<210> 3387 <211> 1146 <212> DNA <213> Aspergillus nidulans

<400> 3387

gcaaaggtac cgattccgga aaaaggccct cgaaagcgag tgcaagtcgt ctttatgccg 60 gggccagatt tggtccattc catgtctacg cccggagtat gaagtgagaa ggatctcgat catattettg gacagtacgg ggtatgttat gttgtateta tettaaaett egegeaaget 180 aactggtcta gactttcatc gtcgagcgaa gcgggacaga tattgacaag gcgctcgcgg 240 cattgcagcc atggaaaaag aatatccatg ttattcaaca acttattcaa aatgacgtta 300 gcagcactaa gattcgctta ttcctcaggc gagatatgag cgtacgctac ttgatccctg 360 acceggtgat tgagtacate tatgagaata acctetacat ggacgacggt acgacacaac 420 cgacggccga caagggcaag acacgagagg agcccgcgcc ttcaaattag cattgctcaa 480 aaagccagat aaggccacgc tacgacgtca tgacgaccat tgctggtttt acgaagatat 540 taatccgtcg ggcgaatgca atctctgcgc tgatctgagc aagcactgat tccggtaagt 600 cgcaagttgg gggaggattt aatgagccca accctatggg tttgttccgg ctaagatact 660

<400>

gegattaacg acacgcccta tgactgtcat atettcaggt teetetcag agteggteta 720 cacaacagtg atgetggeta tteetetatt ttaagecett aacatetaag tgcageggtg 780 atatttacga atectcaacg ggtagectag tgetgattge ettggeetet teatecteat 840 cecaagagte eggtacgeet etettgggea catgtetgt atgteacace gacegtetea 900 tttatteeg ageggaagea eceagttatt tttaageggt teetegteee gteetettea 960 agttatacee tteecatatt ttatgtaceg atategatga eagatagagt eeggtagge 1020 tagacecaca getggageag eeggecaatg tatatacaaa gggtettet gaaaacatgt 1080 ttteetetag ageaaceeat eatgaataag taaateeeee eeeetete agattgggtg 1140 gegaac 1146

<210> 3388 <211> 1674 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations

3388

ggaataagcc cgcgagcgca aacgtcgtgg aacagaaacg acgaagcagc accgatttga 60 gagettetet cagegtgtgt egaagettaa gattgaeece atecacegtg taeggegaee 120 cagctttggt gaagaaggag atgagacgtc ctcccacttc cgttcggcgt tcgagcactg 180 ggctgagttg aacttgtctg agaactttgt cgcattttct cgccgagtga gcccgctatg 240 cgaaagtctg gcgcaaattg tttactatga agagaagata ttcaacttgc tggtggaata 300 catcgataag cgcgacagta actcaataga gcctctactg agtctgctct cccagttcgc 360 tegagaeett ggegtgegat tegagaggta ttttgeggee tetgtgaete tggtegette tgtcgcggcc actcatcccg atgtcgaagt ggtcgaatgg tgcttcacct gtctggcgtq 480 gactttcaag ttcctgtccc gacttctggt tcccgatctg cgacaacttt taggtatcat 540 gacgccgtac ctcggaaagg aacgacagaa accgtttgtt gctcgatttg ccgcagagtc 600 cttgtcattc ttgattcgca aagccggact tgtctactat aagaacccgg aacctcttca 660. actggcagta acattettgt tegaegattt eeggeaggee gtaaeggaat egaagaatgt 720 ggagctatat aagtccggtc ttatggcgat gttttccgac ccgattaaqq gtqtqaaqaa 780

cgggttgcac tcaattggaa cggatatctt tcagtgccta ttgaagtcgg tgtgcactga 840 tgacgatett eggageacee tegeaettga tgttgegage ggtgtettga teaacateat 900 tcatagtacg acgeetgagt egttegaace cattategat atcetaaegt cetatgteca 960 atccgatgtc acgactggga ataggaactg cgctgtcgcc tacacccggt tactctttct 1020 ctgtgttact acccgcaaag gatcgcgtgt caagaggtgg aaacctgtgc tcgaaagctt 1080 gctccttttg ctccgggccg ctgagaaagc atttgatgtc ttttccgacg ccatcccgca 1140 gctactcacc gcagtcgcgt attccctcca aatatcgcca atggacgaga tgctgccttt 1200 catgcgtccc ctcatggacg ccgtgacagt tgacagtctc tcagcctact tgctatcatt 1260 ctgctctacc ttctccgaat ggggtgcaga gcgatttcac agcgttgttt cttcgtattt 1320 taaaggtccg tcgactgttc cgaqtqaaac tqaaattcgt tacatgtcta gattcgaaac 1380 aactttggan gaccggaggt cgactttgtt aacttactag ataagcgggc aagtgcgtac 1440 atagaaagtt taaaccggtt ttagttgtca ctttctgaga aagatttgag agcgtgtaaa 1500 cacaattaaa cgcggggctc gagagcacaa attcccaagg ttgttgtggg cttttttata 1560 tgggggaaaa aaaaattgct gcccggaata gctacccttt ttttttgtgc tgtaagggat 1620 agacttacat catttctaaa aacttggggt gaaacgtttt ttctatatat ctgt 1674

<210> 3389 <211> 3618 <212> DNA

<213> Aspergillus nidulans

<400> 3389

aagcacctta tcatttcata gagattgcgg tttctagatc tacgccagga ccgagcaagc 60 ccagatgaga accgacgcag atttccttgg cacctgttgc ttcagctgaa tcctggcaat 120 acgagatacc tgctttgaat attttgaata gctcgcccgc tggagagcat cctgaatgca 180 agtaacaacc gtagaggctg acacggcagg tgttgctagg gagcgtcgtg ttctacaagg 240 ccagacgtct tcgcggttga tatatatgta tgtttgactg caggctgctc agcgacgaca 300 gtcaagttcg ccctcgctgc ttgtgcaata atcgcagtgg ggaagccaca ccgtgactcc 360 catctttcag taaagctctg ttggtgttta tcagcaatac acgtaattta aactcgttag 420 catggggctg atagcttaat taccgtttac cagtgccgcg gttctgcagc tttccttqqc 480

ccgtaaaatt cggcgaagcc agccaatcac cagctaggca ccagctaaac cctataatta gtctcttatc aacaccatcc gctcccccgg gatcaatgag gagaatgagg gggatgcggg 600 gctaaagaag cctacataac cctcatgcca actcccagtt tacactcgtc gagccaacat 660 cctgactata agctaacaca gaatgcctca atcctgggaa gaactggccg ctgataagcg 720 cgcccgcctc gcaaaaacca tccctgatga atggaaagtc cagacgctgc ctgcggaaga 780 cagcgttatt gatttcccaa agaaatcggg gatcctttca gaggccgaac tgaagatcac agaggcctcc gctgcagatc ttgtgtccaa gctggcggcc ggagagttga cctcggtgga agttacgcta gcattctgta aacgggcagc aatcgcccag cagttagtag ggtcccctct acctctcagg gagatgtaac aacgccacct tatgggacta tcaagctgac gctggcttct 1020 gtgcagacaa actgcgccca cgagttcttc cctgacgccg ctctcgcgca ggcaagggaa 1080 ctcgatgaat actacgcaaa gcacaagaga cccgttggtc cactccatgg cctccccatc 1140 tctctcaaag accagcttcg agtcaaggta caccgttgcc cctaagtcgt tagatgtccc 1200 tttttgtcag ctaacatatg ccaccagggc tacgaaacat caatgggcta catctcatgg 1260 ctaaacaagt acgacgaagg ggactcggtt ctgacaacca tgctccgcaa agccggtgcc 1320 gtettetaeg teaagaeete tgteeegeag accetgatgg tetgegagae agteaacaae 1380 atcatcgggc gcaccgtcaa cccacgcaac aagaactggt cgtgcggcgg cagttctggt 1440 ggtgagggtg cgatcgttgg gattcgtggt ggcgtcatcg gtgtaggaac ggatatcggt 1500 ggctcgattc gagtgccggc cgcgttcaac ttcctgtacg gtctaaggcc gagtcatggg 1560 cggctgccgt atgcaaagat ggcgaacagc atggagggtc aggagacggt gcacagcgtt 1620 gtcgggccga ttacgcactc tgttgagggt gagtccttcg cctcttcctt cttttcctgc 1680 tctataccag gcctccactg tcctcctttc ttgcttttta tactatatac gagaccggca 1740 gtcactgatg aagtatgtta gacctccgcc tcttcaccaa atccgtcctc ggtcaggagc 1800 catggaaata cgactccaag gtcatcccca tgccctggcg ccagtccgag tcggacatta 1860 ttgcctccaa gatcaagaac ggcgggctca atatcggcta ctacaacttc gacggcaatg 1920 teettecaca cectectate etgegeggeg tggaaaceae egtegeegea etegeeaaag 1980 ccggtcacac cgtgaccccg tggacgccat acaagcacga tttcggccac gatctcatct 2040 cccatatcta cgcggctgac ggcagcgccg acgtaatgcg cgatatcagt gcatccggcg 2100

agccggcgat tccaaatatc aaagacctac tgaacccgaa catcaaagct gttaacatga 2160 acgagetetg ggacacgeat etecagaagt ggaattacea gatggagtae ettgagaaat 2220 ggcgggaggc tgaagaaaag gccgggaagg aactggacgc catcatcgcg ccgattacgc 2280 ctaccgctgc ggtacggcat gaccagttcc ggtactatgg gtatgcctct gtgatcaacc 2340 tgctggattt cacgagcgtg gttgttccgg ttacctttgc ggataagaac atcgataaga 2400 agaatgagag tttcaaggcg gttagtgagc ttgatgccct cgtgcaggaa gagtatgatc 2460 cggaggcgta ccatggggca ccggttgcag tgcaggttat cggacggaga ctcagtgaag 2520 agaggacgtt ggcgattgca gaggaagtgg ggaagttgct gggaaatgtg gtgactccat 2580 agctaataag tgtcagatag caatttgcac aagaaatcaa taccagcaac tgtaaataag 2640 cgctgaagtg accatgccat gctacgaaag agcagaaaaa aacctgccgt agaaccgaag 2700 agatatgaca cgcttccatc tctcaaagga agaatccctt cagggttgcg tttccagtct 2760 agacacgtat aacggcacaa gtgtctctca ccaaatgggt tatatctcaa atgtgatcta 2820 aggatggaaa gcccagaata ttggctgggt tgatggctgc ttcgagtgca gtctcatgct 2880 gccacaggtg actctggatg gccccatacc actcaaccca tggtacccgt gcctcagggg 2940 tgagctggtt gttgccttgc ggtagagtaa taacgatagc tcagccttgc aggtgatttc 3000 egegtetgte tattgteett attactgtgt egagteecea agttttette caatagacat 3060 cagtaagagt accgctttta tattgttgtc ctaggaggac attttccatc ctagtggagc 3120 gctcctacca ccttggcatc tgaagctcct gttatcagga ctactttgtc gctgtagata 3180 cacacagaag cagtaacgtg cagactgtcc tgcggtgcca cggcatcaat aaagaaaagt 3240 agaacctctc ggagactaat caaccgagtg ccatgatata tatgtatgtg ctaagcatag 3300 ttaacgaaat acagacgatt aagtacagct actgaagcac aacctggagg tcacgtgtgc 3360 tgagttaggg tcatatttta cagtggaaac ctcggttggc agctggcttt gcaagataat 3420 ccaagatagt caggtgggag tcaggtcggc ccaaggaaag cgtaaatcca caaaattctc 3480 gaaaaaagtct ctgaagtaca ttcctgagta gtggcaactg gacgcggtgg agttcatgat 3540 gcaaacaaga ctggaagcac cgacgtagct ctggcagttc ctgcttcaat cccctctcac 3600 cagagactta gtagtgag 3618

<210> 3390

<211> <212> <213>	362 DNA Aspergillu	s nidulans				
<400>	3390					
gatcgcttac	gataccctcg	aggtatgtga	acccggctag	tggctggtaa	acggatattc	60
gctgaacaat	actctcaggt	ccgaccacgt	cacgacttcc	gggccgcgag	tctcagagga	120
tctcacggga	agggatgagc	tgtaaaggct	gccctccagc	ttttcgtaag	acgctttaat	180
agcagcgggg	cctcctgctg	cgtatagcgg	acatttagtc	cccacctcat	tgcagtagat	240
ggagaattta	tcaaagatgg	cgtcagcatc	accaataggc	tccggtccaa	tttcggtata	300
gtacttggcc	gcatcaacta	cgccatctaa	caacatgcgt	tcgatacggt	caggaaagag	360
tg		•				362
<210> <211> <212> <213>	3391 1162 DNA Aspergillus	s nidulans				
<400>	3391					
gctaggttat	aggaaactgc	tccagcggcc	ctatacgttt	gtctaataga	taacaatagc	60
tctattgtta	aaccaagtgc	agttattatt	ccggataagg	aaagtccaac	gcttcatact	120
gatgtatatc	tatcagagaa	tttacttcct	cccgttcccc	ccccacctag	cccagcatag	180
tatcgcatca	attataacct	ctgtctcaac	cgcaaaaaca	gcccctcaat	cctcccttag	240
atttatccaa	ccctttcgct	acttttaaaa	ctgacaatgt	gtctcctcct	ggggcccatt	300
ctcagcacaa	cgacaaacga	ttcgaaccca	gtctcagagt	cgtcctcgcc	acgtagcaaa	360
aggtcatgtc	tgaataagac	atacacaacc	atcaacttaa	tctcctttct	tcgccgtttc	420
tacgcaatgc	aagaccggaa	ttcaggctga	atagggagaa	tttcggctaa	tttcctgtcg	480
tcatcattgc	ctccatgctg	atctgcgctc	ggaatccacc	gcgcaggcct	aaacgcattc	540
gtatccggaa	atactcctgc	atcgcgtaaa	catgggtgcc	tattcttacc	ctttggagag	600
tgacgatcgg	atactgacgc	ccctcccctc	gtgggggcg	gtggggcatc	cccgatattg	660
gcggtgacgg	tagaaaggct	tcttttggcg	aaattggcgg	tatacatgat	ttcgacgcgg	720
gaccagagcg	agataccggt	gcgtctagaa	gcgatctgat	aagaaagtct	tgctgcgtgc	780

gagggttgtg gagaaaatga aaacttgttg aaacgtgttg cgagctctat attgttattg 840
tatcgaagcc cgcctcgttg gggatgtgaa gcacacagag taagcgctat ctattggcga 900
gcttgagcat aacagcaaga atgaagtgca gttattgacc tacaactcct tccaatacat 960
atgtttactg ggcctggatc ttcaccatag aggctgcgga agaagtccat ccgctagtca 1020
tggttgccta gcttgacatg gccttctgat tggattagaa tctcgacccg agtttcttgg 1080
taaccccagc caccggtggc taggaaagct tcattccca gccttggaag cggccctaat 1140
ttacgtggct ggaccaaagc ca

<210> 3392 <211> 1617 <212> DNA

<213> Aspergillus nidulans

<400> 3392

taagcaatat aaccttegtg caccacgeca eteteeteee taatteaaae attgeateea 60 agcattactc catctattga acctatccgc aacaaaacca ggcgagtccg aaaatgtcag catccaacga atcctcggcg cccaagaacc tccgtcccct ctccagatac ataacaaccc 180 acaatgccgc cggaaaagca atcttctccg aatctattgc gccgactatg cctgtaacac 240 cgatccccga cggcgccgac ttctccctgg catacacttc cccgacaatc ccggcctcct 300 tcgccaacga aaccgacatc gccgcttatg ccagctacct ggaaccggga aactcgccgg 360 gcctggtgat ctcaacaggc tctgtctgcc ggatcgtcga tatgccgcct aatgcactat 420 cgtccatgca tagaacggtg tcgctggatt acggcgttgt gctggagggc gaggtgcagc 480 tcgagttgga tagcggagaa acgagattgc tcaagagagg agacgttgcc gtgcagcgcg 540 gaacgaacca tgcatggaga aatgtcacac ccccggggga ggatgggcag gcccagtggg 600 cgaggatgct gtatgtgctg ctgccggcga aaacagtcga gattgatggg aaggcgttgg gagaggagct gggccacatc ggcgtgcggt cgagtactta atatataatc ctgacagctt gggcaataaa atatatgcct gtgatctgtg atggtgccgt gccggtgttt catatattaa 780 gtagtttgaa tagaaaggca gaacatggcg gtattttacc cctataaata aggaactagc cctttctacc ttggagaccc aggacaaata cagttcagaa caaccccata tgataaattg 900 ctataagtta acttgtcaat actcccctcc cacttcgtac cgaaagatcc ggtcgttgat 960

cttccctcct gtcgccgcc atagttgtgc aatactctag accattatca gcacttgtct 1020 tacctccaca atgctgaacg taccgcgtta agccagaccc cgtgcagcat ggattgaatg 1080 aaaatatact ccggaacgct ggacccggcg ctcctctcag caaagtcaag attgcggttg 1140 atgggcctgt agggcggat gcggcgatgg tgggttggcc agctggctgg gtttgcttga 1200 tgggctaaag ccaccgattg ggactgtga ggcgaagaca aagatgcgga cggaggagga 1260 gtgctgtggt gcagttcgta gtcggcgagg agggatagag ttggggctgt ggagtgggtg 1320 gtcgaagaca ttttgatata tgctcctgaa gaggagaaca gatgaacggt gacggtttga 1380 acttggaaag aggttaaaag acgcctctgg ccgaacagta aagacaggct aagacggcca 1440 gctcattcag cagcttgact agtgagagtt cttttctgct ggtgctttct tactgtcccc 1500 tccctccccc cgggaccggg gcgcatgtcg ggggctccc cacatccaga acaggcgagc 1560 gctgtcaggt ctatgaatga tggccgaaag atccagggtg ctggacaaat cacagta 1617

- <210> 3393
- <211> 3378
- <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 3393

ttcactgatc ccccacacag atatctgcac gcattttcat acaatactag tcttattccc tctcttcatt catccatgtt gtgaatctcc ttacaacatt ccttccattt cattttcatc agogtocact toatgatoat ggocaacact otgotttoga actocagagg caccottgog 180 ggtgcaatat caacgtggaa ccccgacaca ggagaggcct ctagcccact tgctatatat 240 agccgtcagg aaatatatgt cggtcgagac tcgaggaagt ggcaacttcg gcccatcacg 300 tttttcctcc ttccgaacta acgtagctca gccagtacgt cgtgaaggac ccgctcgttg 360 ggaataaaca totgaggatt tacacoggca tottggacca agataaccog goggaggatg 420 caccactggt ctatgcttcg gacattctca cgaagccgcg cttgtggaac atttacagaa 480 tgggaaatgg acggaaaagc ttccttctca gtgacggtga tatcctccgg ctttcggaga 540 gggtatatet gatttatege tetetegata atgeaeagea eaegtatttt gateetttee 600 aggttcatga gatgagggtg agtacttacc aatgctgttg acaagtactc atgtgttgca 660 ggcattctcc cacgaatacg ttatcacgcg gcgcaagctt ggctctggtg cttatggaca

ggttcatatg gcgtacaata agagtaccgg acagcagttc gcttgcaaaa ttgttaacct 780 cctcgcagtc aagcatcagc tggccaaggt aggagaggca cgacacgagc tggcatttgg gaagaatatt agtgcgaaga tgaaggacag ttatgtCagg ttcCagctac aggagactct tgagaaatac caccgcgagg cgaagatact tgaaaccctg caacatgtaa gtttggcttc tatgtacctt tcctagctaa cctatgaagc cgaatatcat tggcttggag aaggtgtata 1020 ttagtgacaa taccatgtga gtttgatgtc gagaaatcaa tattctgttc tgatatgagt 1080 agatatatgt tecaggatet titgaceget ggagacetat teteetaeat ceagtacaaa 1140 ggtgggagac tgcctgacat cgaagcggcc gttattgtgc gtcagattgt catcgccctt 1200 gattatetee atgacagaaa catagteeat agggaettga agecegataa tatettgatg 1260 acggccctgg\_ccgacggatg tagagttgtg ctcactgatt tcggatgtgc cacctttgtc 1320 gacccgatga caaatcgaat gctgagtacg gttggaacct ttgagttcag cgctccgtca 1380 gtactattcg atccttgggg atatcacgca ctgatcttgt atagtgaggt agtgaggcag 1440 aatcgtgaag gatataccaa ggccgcggat ctatggtctc taggctgctt ggcggccgtc 1500 cttctcaccg gggaacctgt gtttgataac atgcgcaatg gccatgatga aaactgccgg 1560 ctgaaagcta tcgaagagct aaaggtgaag atgcatcgac ttaatgtggg cgaccgagct 1620 caagacttcg ttttccggct acttcagcaa gatgtacgca agcgcatgga tgtcaaacaa 1680 gcactgcagc atatgtggtt caccaacccg tcgcacaagg ccgatttcga ggcactctac 1740 aagcgttgta tcagagactg gaagccgcgc acggctgaac aaccattaat tgttaagctg 1800 aatacttacg tcaacggtca gacccagaac cagaccatac ccaggatcaa gaaggagcat 1860 tetttegtgg etgaateete eteteagget gateeggtee eaceateaae aggegagaea 1920 gaagacaaga gccccgagag cctttcagac attgtccatt ctccgtacca tgacaagtct 1980 caacaaacgc gctcttcggc tgaagtagca gtatccgtat tgcaaccgga ggaggactac 2040 gtaaacggta taaagcgatc ccattccagc attgacgagg ttgaggatcg agtttacgag 2100 gaggtaatga acceggtaac tggaaagega cagcacttgg tgtatggeta ctgggecaeg 2160 gccgcgaaga aatgagtgtc ttctccatga atattcatat cacatcggtc ttacgagtac 2220 gaaaaccgtt tctgttgagt tgatcctaag ccaacagcgg gcagttgcag cagacaggtt 2280 tacgtagttg acgataaaac tttcgttttc taaccactta acaagttact caccaccagc 2340

atgtccaatt caccatccct tcgcattaaa acccatcgaa gccccgggta gacatggcgt 2400 gacccagaac taaaaagaag ctgatttact ctactgtcaa actctagcac tgctcattta 2460 ctgctatttc ttaccaacct ggtcaatcca tggctcatga ggaaactntg ttagacttca 2520 agatttgttt accatgaatc cgaccgatag cacagtgaag ttcagcaggg ttcactgtac 2580 cgtcagaagg gggtagagtc atgagactaa tgcacgtgaa gatagcacat acctttagga 2640 agccctaggt actatgcaaa tcaagatcac ctaaggtagt tccatagtag cctcggaaag 2700 acctctcaat tacattcaaa cagaacagct atctcacacc tgggctcaaa gaacaaggaa 2760 catggcccat ttattccata caactcctta ctggaagccc atctaccctc attgacctcg 2820 ccctaccttt ctaccctacc, ctaccaccac tccttaccag aaaaccgata aacaatatcc 2880 ccqaacccaq ctqtqqqqaa aacatagaac cactcaagcg tctcttctcc gcgattcacg 2940 acgccgtgct ccgcgtcccc ggggatgaaa aggacactcc ccgcagagac ttcgtgctgg 3000 tggcggtgga gtgagagttg ccccgtgtgc ggtgggcagc ttgctagccc agcgcacatg 3120 ttactgctgg gggtgaggtg tgggggggaa gtggagagaa gggtgcgcca ggttaagttg 3180 ttggtactat ttgagtcggg gaaggattcg gcgggtaggg agcagattgt ttctggtttg 3240 aggacaatcg gttctggctt ttgggctggt gctgtggttg tacttagagt tgaatttgag 3300 aatgaggteg aeggegggtt tggagettgg ggaetegetg getgtggttg eggtgeatee.3360 3378 atgtcaaaat atatagag

<210> 3394 <211> 969 <212> DNA

<213> Aspergillus nidulans

<400> 3394

ctcacactat agggaggacc caagcttaag gatctagatc gggcgaacaa atccacctcc 60
aagagccaag aaagtcagag aagcgacaga ctccccgcgc tgtaatcgga cttgcgacca 120
ccacgaccgc cacctaggag tgcagcgtac gactcgacgc cactgatata tacacagctt 180
cggataaaga tatatgggac taggaacaaa ccgataatat gtccacctca ccaccaacag 240
acgcagacgc agaccaagct cagccgaaca ccatgcaaat gcaagcaaca gagcagcaac 300

ttaaagcccg cgctgaaggc gtctcaattg aggtatgggt ctctgccaaa catcctttac 360 caattacttc catggagaca aaaaggaggc gaatgctaat caatgcatca aggattacct 420 cctcccgcgt tccattaccc tgcgactagc aaaatccgtc ctgccaccga atacatccgt 480 gcagaaagat gccgtactgg ccattcagaa ggctgcgacg gtgtttgttt cttatctqtc 540 ttctcagtac gtgttatcac atctaaatcc attttgccac tcgcaatcct gaacaacacc 600 gctaatatgt tttgtcgtgc acagcgccaa cgaagcaaca ctaaaacgaa cagtctcgcc 660 cgcggacgtc ctcaacgcac tctcagagct tgaattcgag gggttcagac cqcgactaga 720 gaaggagttg gataagttta cagaccttaa ggctgcaaag aggaagccga ggaagagtgg 780 tgatggagat acaaaggcca atgttgatgc tggtgccgag agtaagaatg gggtgcaggc 840 ggcaaaggat ggtactggtg atgcggagat gaaggaggtc gttgtccgag ggtcaaaggc 900 gaagagggtg aagagggacg gtgatgagga gattgagaag gaagaccagg atcatgacca 960 969 ggatccgga

<210> 3395 <211> 1722 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3395

cagcaagtaa tctattccca aataagcaag ttagcgaaga aagaaggtca gcttttggcc 60 aaggtgccat gcaagtaatg tttagacaac atcttgaaca gacaacgggc gttttaataa 120 atacttaaaa aggtgcatgc caattaaaga agatgtatgc ggccaaagaa gcttttaaga 180 attgtatgct gctctatctt atatcttagc cgctgcatct tcaaggtctt gtcatttaac 240 atcctcctca ccgacaggac aggccccaca tgtccttgca gtaggtgctg gaagctcagc 300 cacagtgcaa ttaaataagg gtccagagta tacatgcgcc accaaacact ctaggtagct 360 aacgatcatt cattatcagt accggccatt ccggccatcc tctctaatca tggaacacat 420 ttgaccagat gacgcaacca aaatagatat ctacctaaat agaccggtca aatacattaa cttagcataa atctggcaag aagtaagtga gcaaggttca tatttgtagc tgaaagcaaa 540 tcacctgtgg cgtgagatct ataccagaca cacatcaaag gggtccgtaa ttagagtttg

gtggccagat taaagtgcag atcctgatac tgcggcccaa gacttcgggt cctccgcaga actttattgg caaggacaac attaagacgc ttataattag aaccacaaga gagctaaatg 780 atccacggaa ctcatgagta agccgaagaa atgcttacta aatgcaggtg caaactaact accaactgct acqaagttga agcggcttac caaataaaga tacatagtac tttccagcta 840 gaattagaat teeagtataa ettettggag gattttagte atettgatea gattgteaag 900 attgacaget tggeeetgae actataegte agattttaet gaatgatgae tttaggtgag ctgcgtcagg gtgtacggca ggccatgcca aggaaagcca cgcgtctttt taagggtcca 1020 cagactggac tagatttgtc tccatcaatt ccttcaattt aactaagtga aattaagacg 1080 atcagttagc atggttggcg tttgagtttc cgacgtttcc gactcttccg aatgctactc 1140 gtccagagac ggccggtggt ccgaacatta gattactttg tcatcagaac tttatatggc 1200 ccttggggtt aattatggtt gagccctca atcggtcact agaaggacag aaactggcgc 1260 acctgtctag ccggccagat gagttccagg ttgtacctcg gttgataccc gttttcccat 1320 acgttgaaag atagatcaac agcagaggcc tggcccggct tatttcgcaa agactctaac 1380 catcacaatc tcaatgcaaa atttcgtcag atttttgtca atggcgtgag ccgccttcac 1440 ccgaaaagtt cagtgcaaag cagaatacca acatcctgcg ggggtaggcc ttgaccataa 1500 gaaagtatac tcgatggcta tatcgttaag gaagaccatg gtaattagct gaaccttata 1560 ggctgnccgc caccegaccc gngccgtcgc ccttgatctg ctgcatctgc gtccttccac 1620 caagtgaagt acatgcccca agtgcttgcc aaccctacct tcataaacag caatcctgat 1680 tctaacacag gcaacattat attgcctaca aaaagtcatt tg 1722

<210> 3396 <211> 9179

<212> DNA

<213> Aspergillus nidulans

<400> 3396

tgtggaatta cgttggcatc gccgcagagg gacccgctgg catggttcta gggggtagtt 60 caggaacttc tgttattgcg ggctggggcc agggcaacca gtacgtccct gctgggccta 120 ccagatttgc cggtgacatc acggcggttt cgcgtcctgc aggattgttg gacggcggaa 180 agtattatca acgctccaag ccacagtacg agtctctttc tgtctcgcca ttctccagcg 240

ttcgggaagg aggcgccacc ggtgatggaa ccacggacga taccgatgcg ctgcagaatg tcattgatgc tgctgccgta tctgacaaga tcgtcttaat cgatgctggc gtttacaaag tgacgaaggc attgcgcatc cctgcaaatt ccaggattgt cggcgacgca ttcccagtca 420 tectgtegag eggegagtte tecaaaceag gageageeea ageetgtggt geaggteggg 480 cagccaggtg acgaaggcca cattgagctc tcagatttcg taatcagcac ccagagccct 540 caggccggtg cgattctcat cgaatggaat ctcgcgtccc cgtcagaccc gtcgggaatg 600 660 tgggaagcgc atgcgcgcgt tggtggtttt gcagggtccc agcagacaag caaggagtgt gccaaaacac cggacacggt gattacgaaa gccaacaagg actgcattgt agcctatatg 720 ctcatccacg tcatcccctc agcttccaat ctgtacatgg agaatacctg gctttgggtt ttctgaccag tgagtcccta tacacgcttt ccgccgcgttt cgttcggtca actcagcatc 840 taacaacttt gactgcgata ttcacgtcca gaacgaggcc gccagagcca gatcacgctc 900 tacagcggac gtggtttgaa tatcgagagc acaacgggaa acatctggct gtaggctgcc 960 ttcgcggctt cggcccttcc tctgggtcca tgagctgata cgtgagaatg agcaggtccg 1020 gcacctctgt cgaacacagc gtgctctata agtaccagtt cgtttccacc aagaacgtgc 1080 atatgggaca gatccaaaca gagacagcgt tagtgtcccc ttaacccttt gggcgtttct 1140 ctaatactca cacgaggacc ctcaggtact atcaaagcct ccctaatgct ctgattcctt 1200 tegegeetaa teeeteaate caegaeeeeg acateaeete aagetgegat ggeegeacag 1260 ggaactgtgc tattggctgg ggtctccgaa tcgttgactc gcgagatctc gccgtgtacg 1320 gegeeggett gtatteette titgataact atgacacagg titgtetete atgettetti 1380 atttttacga ccttccgtgc attggctttt tgtgcatgcg gactaataat tcgaacccct 1440 tatagaatgc tccgcgtacg gcggttatca ggattgtcag aactccattt tcagcatcga 1500 gggagaagtg acaatattgg tgtcttcacc aacaacatcg cgtattttaa gggctagtga 1560 gtaggtacca ccggaacggg acgaggtcga gaggtaatac taaggaccgt aacctcgaaa 1620 atggctagca catagcatct caatgctcct tcaatctatc ttgacatgtt gcctaatact 1680 ctgtccctgg gcttctgtaa ccccttttct cgcccaactg atctctttac aaataactaa 1740 tcgcgtttgt cattgtaatt atagagttgg taaggcacaa acctataggc accatcatta 1800 ttgctacgca catgcgttat tgatatcgag gaccggcttg tccttgaacg gtacgttgca 1860

ccgttagacg cttcagactt ggaggacaat ccctcggcac cccttgcagc ctggccctat 1920 gtgtaaatat tgacaggatc ccagcagggt tttagcgact ctacgtagtt atcggtgtat 1980 ccgaatcttg aagcagtagc accggagctg attactaaac cgccactggg actcgctgtc 2040 ctagttgcgg tcctggtcct cgtgaaacat atttactcca aaccttacct aatcagcgct 2100 cgagtaggtg actgggtgtt tgagcatgtc gtaaagcacg ggttagtgtc gcccctagcg 2160 gccctatggc cagactcccc gcgcttctag actgctccac gacttatttt gaatactacc 2220 cacggagatt accaggaggc cctggtcaag gactccatag gtaagtccct ctttaacttg 2280 cagtttacac cgcgctcctg tcttcgtcta agggtcctgt ctgttccctc gacttgatga 2340 aacgccaagc cgccggatgg aaccctgatc aatcccttca cccacttagg taagtggcaa 2400 acatgcgatg tggatactgg acatgtccaa ttgagtgaaa accagctcag aaatccccga 2460 aggtggcgcc atttcctgac ccccacttga caggaccagt aggctgagga ccctggaccc 2520 tgaaacccga taggttcccc tgaaacgggg cccttgccga ggacctgact ccgcgattcc 2580 gcgttgcagt tgtagctgca atgcatcaga tccccagact agccgtgctc tatactccac 2640 gagacgttgg ggccgctgaa cggagcctgg attctcggat gccggcactg ccaagcgtgt 2700 gcgccagaga ctcgtgcatg catggtataa cggctagatt gcacgtactc ttttatggtg 2760 gtaggeggtg cateagtact tgggttggaa tttcgttgaa ttctcatact acgctttgct 2820 ttgcttcttt cccatatctc acatgattga ctacgctgtt ttgccgaatt tgtgccgaat 2880 ttgtgagtat gtggcttgga taggagcatt atcggagaaa cttcgaacct gttctcaatg 2940 aagggctaga ctttatagct tggtcggttc tgtctgctga atgacctttt aatgtcgaat 3000 tgctacgtac atctacggct gcacgtccgt cgacaggcaa tgccccatgt gatacatcct 3060 ccgatgtgtt agccccgtg ccggtgttgg cataaatgct acgatgacgg agttgcccaa 3120 cggtcagata tctcgtccca ccgatcctgg tagccttgtt ctggaggcct ggggccaggg 3180 attaatgata ggctcgctga tcatcatggc cgcggtgatc ctcgccaaca tgaaagggca 3240 catcettete cacaaactga tttttgtega ggtaagetet geettggaaa ataaagegae 3300 ggagtccctg gtgcagctac gatggataat gggtgacctg aaatcggcag ctgctccttg 3360 ctatcccgca cggcacattc atcttcaaca aacctcctgt ctacgggtgg tacctctcgg 3420 tcagcgccgt tactctcaac atctcgtgga gcctacataa tgtcatctcc tggatgaaaa 3480

acaggecett titetegaga aaggtateea tageataeat egeeaeegte etgetggtee 3540 agccgtattg ggtgctggag atctatgcca actttacata ttttaacaac atcaacagaa 3600 tattcgaggt tactcgaccg ctggaaccgc tattccggta tggatcccgc ttttgccttt 3660 attetetegt titigteetta gaagtgattg aggataaaaa tegeagtget gaaaatetgt 3720 gtctcatagt gatccgtggt ggatctacac ggcctgctcg ctgttctacg ccattaaatg 3780 cagctataat ttcggcatcg ttgaattggt caaagtcagc ccgcggctgg gtatcatgtt 3840 ggcttccatg tgtctctcca ttgtgtttat catcgtggat acattcagcg ttcttggggt 3900 gttcaatagc gcctctcttc ccattggggt ccagccattc tggaaggtat gtgtttgatc 3960 aaacatagga aaggtteteg catteteaat tgeeceeaca eagetateae teatttteaa 4020 atgectetge aacaccateg teettgatga etteaagaeg geeetegata geateegete 4080 ctaccatcag cagatccaag cgcgaaccca tccgtcgaat agccacatat acggaacgaa 4140 tegeegeeeg cagggetegg ttteagegtg ceageteaea ttggaggaag ttgaggaggg 4200 ggtctatggt aatgagggcc tgcgcgtcac gaggcatctc gcgtaatgtg atcctaagcg 4260 gccgctgggg tcaggtactc gctgggcgcg ggttgatttt gatcaaacga atatctttgg 4320 gatctttgga agcttctcgg agttgggaat cggcacaaat acgtaatttc tcatgcactg 4380 gggatttact ctagagttca tgacttccgc atgctggacg tgaattgata ataaccattg 4440 tatcacaaaa tgtacactaa gaccattagc caacttaata taattatttt cgagcttatg 4500 ttctgcgtaa agaggtatac agagcaagat gagattaagt cccacacgag agtgaagtgc 4560 aactaccete egcaacceae accaaagete eccagtteet getettette acttgteeae 4620 tectecataa actectgeag aatteteage egateceteg catectetge tteateette 4680 caatacgcca acatatctgt tgcattcatg accgcccct tccaaccgag cggcaagagg 4740 tegtgtgteg cegaactgeg getegeeegt ageaatataa gegegeteeg gtateacgag 4800 cgcaacatca accagacgcc gtggtgtcgg tgcctgaacc ccttacgatt tttgtggatg 4860 cgctcaacgg acattttcag cccgcggatg acgaactcct ccgtctctgg gtcgcggttg 4920 ccgtgtgcga tcgcttcgag catgtaaggg aagtagatcc actcgtagca gtcaaggagg 4980 tggcctcgta gaacgaattt caggacatcg tcttccattt caggggttga aagggagagc 5040 actggcggca gggaagaggt cctggccgag agtcagatgg gcttctgctt aggatagtgg 5100

gagcaagcga gtttttagaa ggatcgcttg aatggcaaag ggactgaatt tgaactgaaa 5160 agaacgggga aagtgaagcc ttaccattca gaggcttgaa tttcaaagtc tagtgaggct 5220 tctctcatat tatgggcgtc agggaatcta ccttgtgtct ggtgccagaa gaagaactgg 5280 atgacccgca tcgctaatcg tcgaatagcg gtttcagcaa gatagaaata ccacacccga 5340 gactcatcac gattaagcct ttccatgggc agggatggga aaaaggtcgg atacgtaaat 5400 cgaagcgggt caggttggtt cagaccgagc tccaagcgca gctccctgat cgtgtgagca 5460 gatcagattg aagagcgacg gtgatactgg tagcacaccg tgaagagggg gctcacagtt 5520 cagacttgag acaagcccag tgtgtggtct ctagacagcg aaggtccctc tggaggctcg 5580 cggttgtact ggacccgttg gacgagaaga ccatcatctc tgccactgcg gctgtctgca 5640 caaaacacct ccaggcgcgg acaggctgaa acacagccat caggtaaacg ccggaataga 5700 agaaacactg agtctccagc actccatggg tccggaaaac cactcccagc cgcatctggg 5760 ccgcttcgaa gtatctttga ccaaggtgaa aggacggcga ccgccgcgcc gtcatcgagc 5820 tegatteatg gtgeteetga aaacteteag aaatageeee tattgegeag atgagtaget 5880gtaagtgtat tagccagtgg ttctcgatga gcaatgcgga acggaacgat atgggtgtga 5940 gaggagtece accaeaagge acgagggege gteceaceeg atteegtgaa egeaegettg 6000 gtataggtaa teggtaatea aatggaegte aaggattggg tttgcaatat geaecteete 6060 gagaaacgtg tggagcagcc gggtgcatgt tttcaggtcc aggtccagcc gttcgagacg 6120 cgggtcgttg tttgccagga acggctcctg ggacaaggtt gtctgtgatg agaccagatc 6180 gtaaagactt gggcctgcgt cgtatcttcc attgaagacg ttccaggaga ggacggtttc 6240 gatggtaagt cggctgaggt ctgcgcagtg cgcctggtac aatgggctac catgaagggt 6300 cggcgactcg ctgtctgcga ctgccgagac cctcgttgcg gcttgcatgc cattggtgtg 6360 gtcaacgacg gtccttccat gttggatctg ttgagattgc tgctgttgct gttgctggat 6420 aagcgactcg atctgatcga ggcgttgaat aatcactaaa ctggcagtgt caaaccttcg 6480 gtcgcagtca gtttctctgt tcatacatcg agaccagcga agagcaacaa tacgcagtct 6540 tgaccgggat agtcgtaccc agacaggtca gcagggtcgt tgaccacgca tttggcgccg 6600 attttttcgc aaaaggaaca cgacggcttc ttgttgtcgc atttggtcct acgggctcgg 6660 cacacctggc atgeteteae agecetgega egagggtatg egecagegeg tetgttegge 6720

tgcttagcgg ccgagctgtc gttggatggt aggagtggtg gtagctggat gcgggtgtgg 6780 ggggaagcga gcctacattc cgcgtccaat actagagggt ccaggccccc ggaagacggg 6840 tactccatag tgccgagcgg gttcaaagcg gagtctcgca cagtctaggt gactgtgggg 6900 gaaggetggg gagaaacggt gtettaaate caetgeacee tgetgaeeee agaegaeeee 6960 ggccggcccg taatcggatt gccgttaatt tggcgctaga caggaacctg ctaactccaa 7020 gctacttggc ttgtagcgca agggccggcc ttgcttccca tcctgtaacc agcggggtag 7080 agctagtata gtagggggtg gcgcccaccc acaaggttta gggttccatt caggtcttcg 7140 tatcagctgc ggcgtttgcc cgactttccg ctgtgcctgt catttcagct cctgaggtgg 7200 agagtgtgat attacagctg tcactctggc ttcttacaat tacttgcttt agggagcgtc 7260 ctctagggtg ccggctctag gtgctcgctt taaggtgcta ggtatgttac ctatatagcc 7320 agtggccttt ccacgaatgg ctcggtgctc accatagtat tcgagagcaa attatacatc 7380 aaggeecact ageeggeaa atatggeggt tgagaageee getgageaeg ceaatatega 7440 ggccctcacc cgggccgact cagctgatgc gccggtcgat tctagggcta aatcagccct 7500 cgcgagcgac aatacttcg agcatgagca gactgtcttg caggttcttc ggggtcatcc 7560 agtccttatt tggtgggcgt tttttttcag cgtcagtgcg atcggatggt aaatgcttat 7620 ctacaaaatc tgtgcgctgc ttattctctg ctgacccggc ggctcgccag ggggtttgac 7680 getcaggtca aeggggeagt getetecatt cettetttee ggegtgattt tggegageae 7740 tttgaaggag acttcgtagt tcctgcccca tggttgagcg cctttaattc gatctcatct 7800 gtcggacagt tctttggcgg ttttctctgc agcgccgttg ccgaccgagt cggccgaagg 7860 ctggctttgg cggttggagt gatgatctct tgcggaggca tctttgggga attattctca 7920 accgctaggg ttgcatttct tattagcaag ctgattctag gagttggcct gggcttctac 7980 ctaaccatcg ggccgctgta ctcttccgag gtgagctcga cgatcaggaa atgcgtcaca 8040 aacgccagtc actgacaaac gaaaggtctc gccagtcgtt ctgcgaggta ttacaactgc 8100 aggggtgaat ctgggcatcg tgatcggcca gttactctcc aacgcggcca tcaagggctt 8160 tggcgagcga ggcgaccggt gggcgtacag gggcccgttc gccatccaat tcttcttcgt 8220 gggtatgtct atttccaacg tctaatgtct gatagagcag gctcaccaaa cttgaccgca 8280 gtgttcttgg gcctagggct tccattttcc gtcgaatccc cgtggtacct cgtccgtcat 8340

aacaggatcg atgacgcgag aaatgccctg cagcgactct acggcgccgg cacaaacgcc 8400 gacacgaaac tcgtggctat acgaatgaca gtggcccagg acctcgcagc gagagaatcc 8460 aaatggtcgt atgctatccg tggcccgaat ctccttcgga caaccatatc ctgcggcgtc 8520 tttgtttgcc agcacttggt cggcatcatt ttcgtgctcg gcttctctgc atatttctc 8580 cagctagcag gtctgcctac tgagcggtcc tttgaccttg gagtcggcgt cactgcctgc 8640 ggtgttgtgg gcaccataat ctcgtggtta atcgtcaatc gcctgggtcg ccgcctcatc 8700 ttcaactctg ggatggccat cctcagcacg atcaatctcc tcattgggat tcttgacgct 8760 gttccgacga gcggggctag ttggacacag gctgcgctca cagtcgtctg ggccttcttc 8820 taccaagtca gcattggcg cgttgccttt gtccttctcg gcgaaacctc gtccccgtcg 8880 ctgcgagcta agacgaccgc catggccacg gcgacccagg ccgtatttgg gatcgtcatg 8940 aacatcgtta ttccctacat ggtgaatccc gatgaaggca acatgcagg caaagtcggg 9000 tttgtctttg gagggctgg cgtggttgcg acggtgctc gttacttgta tattccggat 9060 ctgaaggatc ggaccttcga ggaaatcgac ctcatgtttg agacccacga gtggccacga 9120 aatatgggaa gatatgtgat tgagcgctag cgcacatcat aggatcggg tattccccg 9179

<210> 3397 <211> 487 <212> DNA

<213> Aspergillus nidulans

<400> 3397

cacatccctc ggtaagtaaa gaacaatgca ttgatatcaa actggagtta acaagcaaga tagaaccgta gatgatcccc tcgtcatcga agtcgccaaa ttcttaaaca gaactccagc tcaggttctc attagctggg ctgtgcaacg gggtacagca gtgctcccaa aatcaggtac 180 ccctgagaga atcaaaagca actttcgagg gtcggttgtg tcaaccactt tctactacat 240 accaatcagg atcctattaa ctctattgtg ggcagacttc attctacccg aagacgcctt 300 traggetate cagtetetaa aacgacacea geggatgaat tteecagtee gaettggegt 360 ggatatcttt gacaaggttg gtgaggagag tgcacagata caagctcttg agatggctga 420 gggacacaca ttgtccaaga gacaagccta aatactgggt gtgatcactg cagctcttag 480 tagcaat 487

	<210> <211> <212> <213>	3398 1071 DNA Aspergillus	s nidulans				
	<400>	3398					
	cagtaatcct	gccgacacga	aagccatgtt	gtgatactgt	tgtcgtgtta	catagctaca	60
	tatatatctc	gcgtcgggtc	aaagaccgaa	atagagaaca	cgtgctttat	cgagatagca	120
	cgatggaacc	aaatttatat	tttaactggt	aaaagtcaat	acaaggttgg	gcgcatgatt	180
	gccactgtat	atattggttt	gcggaggctc	cgttggggaa	gcacagggaa	gtgaaatcac	240
	atgccacgat	gcccctcaaa	attacccccg	ttgtgaatgg	tcactcgcca	gctgactctt	300
	ctgacgcaac	cgacgccccc	gacgcatcca	gacgcctgaa	tattaaagtt	ctgattattc	360
	cagcttcatt	tagatgatat	agtctactgt	cttcaccgta	tggctcaaag	aaaccttccc	420
•	gggaaacgct	gaccgtccgg	cggaaacgat	ttaagtgatt	acgtcaatgg	ctcgcgatgc	480
	ctagaatact	ggtctttgta	tcaagatcta	aacaaaatga	tatcggggcc	accggatcgg	540
	atagccatga	gggcgcaagc	tatacaccga	cgatttcagg	aacgtctctc	cttcccggac	600
	cagtcgcctc	tcttgtgtcc	ttcgtcgcgc	agtctacctc	tttatcgcta	cgggtaggga	660

cttatttcgg cggagtcgct ctcgatgggg caagaatcac aacattgacc gggttagaac

tgagtcgaac tgtaatcgag gggattctga ccagagccgg gcgggatatt gccgttcgaa

gcagcgggag ttatggcaaa gcagaagccg agtccattct cgagaggagc gtaagctgat 840

cccgggagtc tcatatcgtt cgcgcgttcg tgtattaacc tgatgattag ttggctgcct 900

tgcatacgac gataacatcc gcgtcgttct ttgccgctgc atcctttcaa ttttcctcta 960

caaccctctc	gteegeetea	aatatgtccc	agagagcatc	tctcgacact	cgatgctate	1020
cttgggatca	acggaatcat	cgagagccat	cgcggccatt	ataaccctta	С	1071
<210>	3399					

<211> 598 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400>

atcaacgatt cggctgattg cttcgcgggc atttctatcc tcctcaaggt gcctttctgc

actiticette tecagetgeg ggtetgeegt ggetetatti gggttetega taggggaggt caggtgcttg gagtaatcga tagccttgtc aagctcatcc ggagtgatga agtgattggg gtgtgactct tgtgtaccgg cctgatgaat cttcagggct tcaacaaagg gtgttggtct 240 tccgtgcacg ggatcgccga gagaggcgtt acgctcttct gcaagggctt gttgacggga 300 tagattcacg gccttgcgct gacgcgattg agccatcaag aaaggatcat gtcttcagcg 360 ttccctcgat tcagcggaac cagctctggc ggacgtatag ctcgggttta aagatagtct 420 ggcaagcggg ctctgaacat gtgaggaccc tacacaangg tgtctcatca ttgccaatga 480 taccaacgaa agaacagctt accggtgaat gccttgagtg aacgcttgga cgaaatgcga 540 598 cgaggcattg tgcagagtgt atcttgccgt tgggatcacc aatgcttctc gacttatg

- <210> 3400
- <211> 4098
- <212> DNA
- <213> Aspergillus nidulans

<400> 3400

cgcccgattt ttggccgttc cgaacgacag ataaacgctc tagaacctaa ttcagagtgc cctcacgcgg aatcacacaa ctttcacgga taccgcggac tggataacct tgggttgtca aagtacagtg ggaagcttca taaatgcgac ctacagaccg cacgagtcat cggccaagtt gatcaaaagt ttatcctggt agaaatccct gacgcgaacg catcaactct tgttcttatc gatcaacacg cagcagatga gcggtgtcgg atcgaacgct tatacagcgg ctttttcaat 300 ggctccgagg tgcagacgat tgaggtggag ccgatagtca ttgccatacc acctgttgag 360 acategetet ttagacagea ggeagaatte tteeagteat ggggeattga gtatatgata 420 gggcatgcct cagaaagcgg caaggcctcg atatctgtgt cagcactccc tactcttatc 480 gcagaacgct gccgggcaga acctgagcag ctgattggca tcctccgtgc tgaaatctgg 540 aaacggactg aagagcgccc gcagaccttt aatgctaagg ggactgattc tgcagaagat 600 tgggtccggc agatagcagg ttgtcctcag ggtattcgtg acatgcttaa ttcgcgcgcg 660 tgtcgaaccg cgatcatgtt caacgacgtc ctgagcgtgg atgagtgcag gaccctagtc 720 agtegettgg ctagetgtgt ettteettte cagtgegege atggeeggee ttegatggtg 780 cctctggtgg aataccctgg aaccgatgag ggaaggggta gtacagatga acgcgaggcg

gattetgget teacegagge etteagaegg tggeagteaa catgteagtg ateaetgeta 900 gtactttcgt gagcattata tccgcctatc aatcgggtac agttctcata tgatttttat 960 atgtttcttg gcatacgtag gaatatcttg aagctattat ctatcagcag catatgaata 1020 aatcttccct tcaatcactg agttgaagac cgtacttctt gagtttcact cggtctactt 1080 cggcgcatta tacggggcaa aagtttgcct tcactagatt ctactgtaca gtcacaccat 1140 cttcaatttt ttcgaccacc tacgccggtg cattcacccg tgaccacact gccaccccca 1200 ccggcctttt accaggaatt atatccagca tettcactac getcageeca gaaggaegeg 1260 aaaagcctac tttcgaatcc cagtccttcc ccagtaccag aagctccctc ttctcttcaa 1320 atatctcagc ctcatttcgt ccaaaaggga ctttgtcgcc ttcagacaca atggaaggga 1380 tacttcaaag acatacette aatacteeat aatattgget tteetegetg aatattaggg 1440 cctgaaatcc aaccattgcg ggcacctttc taaaacgtat caccctatag ggaattggga 1500 ggtaactcca aggctctctt ccaaggacag caacatggct gtgtgtagtg gacttgaata 1560 ttctaataaa gaaaaaagct gtaacaagta cagactgcaa cgtagctgct gtctctagac 1620 ggctggcatg actgagtgga acaggtcgtg ctggtaggga cattctcgac aaggaaaact 1680 taacgaccct caagccttgg aaaacccctg aataacttgg gttaattcat catagctgta 1740 cactteeete aactgeggat acetetgaaa gaggtgetgg tgetggetgg taeegttgge 1800 ageggatete accetgettt egtettegaa atgecatace ttecaegata tggttegage 1860 ccttgccaac ttcttcgaga cgaagtttct atcggcggcg atcaagttgg aagattcaaa 1920 tacaacatat atgggatgga acaacaatgt gccgtaaaaa cggcactttt gttatcgccg 1980 ggttttctcc atttttggca tgacagcaac tttagggatt gcaattggcg tgaacgctgg 2040 tcgagcaatg ctctcgagag tagaaatcat cgatttataa ccttacgcaa ggtcaataag 2100 tacaccatcg ataattgttc agggccaact ttctagtttc aatacaagct ataacacctc 2160 gtctacagcg cgtctaaccg cagctggagc attgcaggca ctgacctgtt ccatcagaac 2220 atgtcatgct tctagtgttc tttgataccc gattacgaaa cctaatatca ccattggcag 2280 ttaacgctct, aggacagctg cgcaatcaga gccggtaaga gttgcccctt tgtctatttt 2340 gccatttggg tttggcctag gtgtggattg tgttactctt aagactcagg gtaagaaagg 2400 gaatagaagt caacctgtag ctcatcgtgt cagccaaaat tttgtgcttt ttcagggaca 2460

gtccctgcac tgattttctt ttcgtctctg cattggtggg attaccacta ccgctagagt 2520 cggaaggaat ggcaccagtg tattcctttc atagaaaatc cctcggagtc agattctatg 2580 tagatetttt tgetgetatg aeggtatetg eactgeeaat ggaaatteet aettettgga 2640 ctctgatgaa agggaatgcc agcgtagcac tagttgtata tgatagccaa gctaggatca 2700 ccgaagcact tagggctaaa agatcacgtg agatgcttcc taaatgaggg tctttcctaa 2760 ggtcacccgt tgacctgctc tgtttatctt tataggacac aacggtagcc ctctggaacc 2820 accaagagat atcccgaagc ccttgccgta gcttgtgtat aatgccggga gtaagttgag 2880 atteteacta tetagetgag agggtgttta aegetaegea ggeattttta acaataagag 2940 ctataaatta ctgctaatca ctaaaccggt gacagcattt taggttccat cagttacagc 3000 agtacctggt gtacagcata gttctggaat gctaccagag ggctctaagc gagacccatg 3060 agtctggcat tcgccagaca acctagagac gtgacgaatt ggcaatgcga acactttcta 3120 ttgaatccat caaaacagga acttgcaaaa agggtcaggc tcgacgaata caggccaaga 3180 gggcggtgct aatttgacca gaatgtcgag gatctgatcg catgatattt gtgaagcctg 3240 gcttctcgat ggtgatttgg catgcatgaa ccaaggctca taagtttcct aaaccaggaa 3300 taataatcag ccaggagaag gtgtcaattt tatgccttaa attggcgggc acggaatcct 3360 cagatccacg cccaaggaac aaccgttctc ttagatggca acagtatcac ccggattttc 3420 ccaatgaacg aggcccattc aattcagcaa ggccgtgctt tactaattcc ttggggttat 3480 cgggcctatt acagaatcgt gtgattctgc cacagtcggt gtcaccgcat gtggagcagc 3540 cgtccagtat aaacgtggga gcttagagca tgctctagcg atccgaccca ggcaggacca 3600 gggctgggtg ttgtctcggg gtttcagtcc ctatcccagt ctatgccagc taaaataagc 3660 cggtctttga acattcgtgc aatgagaacc gatgtatgtg gtggtctagt ggccctgccc 3720 ctattccctc gacatcctct gaccaggtcg ctcattcaaa ctcaccaatc atctatcatt 3780 gctctttata tcctaatagg gtcactcgtt tccagagtat ttacttcttc cacactatca 3840 acaatteece ecceecaaag aatgteetet aetaceacea taacegeagt egetteeget 3900 trageggeat cetecaactg cagaggteet ettatgtatg aattgeeegt teaagaegee 3960 gcctgtagaa tcccaaacac caacgactac aaatccattt ttgagagtgc gcctaccctg 4020 tegeogtaca ggeteggtee agetteggge cetegtaaaa agatgtactg ataaccatge 4080

<210>	3401
<211>	1971
<212>	DNA
<213>	Aspergillus nidulans
.400-	2401

caactcatcc aggtcatctc gtacatactc ttgccgatat ccaagccagg tcgacccatg 60 gaggcaattg gggcatccgg ccgattatcg agacccagta aggcccagac aacggcgact 120 tgctttggct ggcggtccga tgggaacgcc ggtgcatcgt agcgggagag ggcccggcaa 180 gttgccatga gatgggcacg ctccttgact gagaggtctt cagggaggtc gcgtgcgcgg ttaatgccct caaaggtacc gagcttgtcg acaaaatcgg tcgttacgat agaggtcgga 300 atgagcgagg gtgcgcgcat gtcgaggatg ataagggcct ggatggtttc accctcgcgt 360 gtcagacggt gggcaacctc gtaggcatac atagagcccg cggaccaacc gccgatgagg tagggtccat gaggctggat gcgccggatt gtgcgcagga aaatggtggc catctcctca atggagaggt cgaagagctc cggctgctcg aggaaggggg actcgagggc gtaaatccgc 540 cggcccttgg ggagggcttt caggtggatg taggactcaa cggtcccaga accatccgtc 600 gtcaggaaga gaggggcttc gcgggagcga gactgaccct ggatcaggac tgcacgcgag acggcggcat ccagtttgtg ctggcggctg gagtcgatcg tggtctcttt cgctgggttc 780 gtcgatgtct gggcaggggc actctcctcc tctgcgtcat catccagagc ttcctgggcg gcgcccactg tagggttggc gctgaagaac gcagcaggga gttcgatccc cgtcttggcg 840 tgaaaggcag cggtgatttt gatgctgagc atcgagtcca tacccaccga gtcaaaggtc gtcgacggcg tgagatcact ggcttccaat cccagcgctt gagccacgag agagagcagg tgctggcttg gtgccgggcc ttgcttccgg gcttgggtct gttctgggct aggggtcggc 1020 ttggtgatgt cctcctccag gtcatccagt gctgagcctc ccagctcggc ttcggcgtca 1080 gccggagtag ggaagttggt gaagaaggct gccggcagct ctacggccgt agtgcgctgg 1140 aagttagcca ggatggagat ggccatctgc gaatcgaccc cgaactcggt aaaggtggtg 1200 ccgggtgagc tcttcatctc cgccacactg accccagtct gctcagctac ggcctgcagc 1260 aattetgtge ecaagtegae catatetgae aegetgetag gtgttggtga eetegaeatt 1320

ggggtgttcg agccggaaga gctgctgggg ctgggcgatg gagcgagctg ccgggcacgc 1380 tttgccatag acttggccgg cgcagcagcc accggcttgg tggagcggcc gcgggtggaa 1440 ccagtgagca gggtaaagaa gtatagctct agcttcttga agcagatgtt cctgcagact 1500 ggaacatggc ggtcctggct cttggtggat tagacgtcgt acagacttgg gccagactaa 1560 tgatactgcc cgcgcatcgt tgcgtataca aatcatgctt gagacaggag tgatagccta 1620 cgttccaaaa agagacacgt gaaagcaatt ggaacttaat taacagacga agccgaaggt 1680 aatgtaaaga acactgtaaa atgaacaggt ttttctggcc acaggtctcc cccgatgtca 1740 tccagactct tagaatcgac tgggggcaag tccatccgca tggagcggtt tttaatttag 1800 aatacccattg gggctttgtc cttaaccaaa aacccccgtg tcgtgatcgg ggatctcgtc 1860 aacttgggtc tcccgattct acaccttttg gggcctcagt tcgtgctaaa cttgttctct 1920 ttgtgcatcc ttacgaaagg cgcaacccc ccgggggcac acaccatcc t 1971

<210> 3402

<211> 4504

<212> DNA

<213> Aspergillus nidulans

<400> 3402

caaaatctgt aaatcctaca aataagcatt taatagtcaa tatataaaca aaacgatact 60 taaaaaagac aattatctca ttaaaagagt tctaattaat aattgaaaac acaactaatg aactgaaaaa ttataaaaca caaagagatc ttacacataa aaatacggta agaaaaaaga 240 acacaagaaa agttccatta ttaacaacta tgcaattgct aacacgcatc agaattcgac 300 gaaggaattt tccaataaga gttactaata agattggaac aaatagacgt agtgcacaag catagaaaca gtcttctagc aatgatttct ccccaataat gccggcttca gttgaaatgc agtggaaaac cccaggagcc ctctttggag tcatccaata accctggtgg aaccatgtga 420 acgaaactga cgcaagtagt ctggcggccg aaaggcagcc ggaagaacct cggtctacat 480 540 cattecacae ttggcagget teetgteega getgatggte ttgaaceece aeggttagtt ctgagatgat gcccttggat ccgtatcgtg tatggactat cgtgatgctc ctgatctccg 600 caaatcctgg àaatacgacg atctcatctg gggcccgttt atgaacaaat acgtcttcct 660 cgtcgcggat gccagcactc cccttggatt ccttgttgat gaacttgagg ctgctgggtt

tgagatcagg ggcattgaca gtgttggcat acattactct gccacactct ggcgctggta 780 ccacaactag ctcggtaatg gtgagatgat caaggccatt tatgatgaat tcttgtagga 840 tatgttagga ttagggctga ttaggcgctg aacgccatat aatttaccta gtattatata 900 catccaagtg ggcaattact tgaagtatat cccagcacaa tttgcaacaa cgacggagca 960 ccatcgatag aatcaaccaa ccagtcgccc cacggcagga aagcgccgcc ccttccacct 1020 gatetaceta gtaatagtet tetecetttg acagageeac caetgacece ttggttecaa 1080 atgctgcgtg cttatgccgc tgaccggggc tctcgatctc cccatattgc aacaggacct 1140 teceaatete ettitetaae ggetetgete eeagacaatg geegacagee agaeggteea 1200 aatccggatt ccgcgtcgtc atcagaacac ttgaaaatga ggttctctgt gagacaccat 1260 ttcgccgcaa ggcaaagaat ccaataataa tgcaagcaac agtaacacca agcgcagtca 1320 tataggetaa tateaggtae teetgateat aaatgtagaa gttgegegag gteaaateea 1380 gcacatcaac agtggtgttt gcggcattaa ggctgaggag attgtaggtg agattgtgtg 1440 agagatette aattgetege geeagegtte tgtteeggea agaagteatt aagetgttge 1500 cataaagata atcactgtta ctgccattcc acatctctgg acatgcaaag agaccagtct 1560 gtgcaatgga caacttggta aatgctgtct gtgaggtaat gttctctctc actgaccctg 1620 aaacaccagt gcgcaagtta ccctggataa ggccagaaaa tagcatatgt accacgtaga 1680 acceccatt gactgtegga tegetattet ggagtagaga gtaagtaeca gettetgage 1740 tccagttaga ataggcaatg tgatcgactg atataggtgt cagggtctga atgccgtcgt 1800 tgaaagtaag gctgaccatg taggaggtat tccagagctg gcagacaagc tcagttggtt 1860 gagaggcatt attattccac agtgggttct gccctgcagc ccatataaaa aagtgtattg 1920 ttaagatcat gaggagcagc cccagagtag acttctagtg gccagtctgt tttgtttcca 1980 atctcactat cccatagtcc ctggctcaac ccgtgcacgt tcaagagagc ttcgctgagg 2040 ctctggcact tgtaggaagg gccccagaat tctaacaagt aggacgaatt tgggaacggt 2100 gcagggactg gaagtacttg catagatgag gcagtcactg taaagaggcg gctgagattt 2160 ggtgaggggg cattaatgcg tcctgctcct tctaatgccg cctcaccaga ccagaaggaa 2220 tcagcaaagc tcacgcttgg aacacctagc ctggaggtct gccgggcttg catggcaaca 2280 acatagagag tagacggcgt aataatagca gtcaagggta tcagcctggt tcgattcgga 2340

caggtaagtc ataggctcat tctggccagt acgagtggag acttggtaca taccaggaga 2400 tgattgccag ggccgtgagc gtctttgcat acagccatag gtcaggggtg aaaaaggcaa 2460 geggaetgte eaggaetgea aacatgetgt caateeeact tagetteaca etetteegge 2520 ggagggtggc ccaggtctcc tgcactgcag cgactccaac cgcggagaca aggcatgatt 2580 tgacgagaaa ggcaaagccg gtcccaattc ggattgccca cgcttgctgg ttcctagaat 2640 cgacaagggt ctgatcaaaa ctgcggtagt agaaatgatg acctactgaa agcatcgccc 2700 cgcaagtgac aagcccgacc atcagagttg gacacctcca gccgatcccc catgcggccg 2760 gtaattctgc gccttgtagt ggccgcggtg attggcgacc tttgttggag atgcggtcat 2820 agtcaacatg gccactggtt gatggagaca tcctatcctg gacatgaact gaggtgggcc 2880 cttttgaacg gctgaggatt tcttacggag gagagaagag aaccettcac cggtcttata 2940 gaggetgegg etecagacaa geetgaetat caaaceeget gteggeetet gtgegggtea 3000 tagegeagte teegetgeaa eageettgea etgeageete aatgeageet ateaaatget 3060 gctgccctaa cgcttgggct atatgtgatt ggcggaaagg ccgtattcgg tagcaggggt 3120 cgggtcctcc actcgccaat agggagcggg tgtgagcaac ggtaggcagt gcaatcccca 3180 gttacaggtg ggcgatgctg cagggccagt gctcctatct catccaatca ataatagcag 3240 tagcagagtc ttatcacaaa ttctttagcc ctgaatttat tttccgagcc ccaatgcata 3300 tacagcagga caattcaagt ttgtacctga tacggaaata tcaagtggcc tttatcgtgt 3360 acacttgacg ccacgtgata taagcggccc agcatctgac cctgatctga cccctctatg 3420 tattgtatcg tgaagaggag atatttatcg aggccttcag ggccttcgcg taaagggccg 3480 aagaaggacg ttggggcata ggcaagataa gtaaaaaaag aaataaaact tggacataca 3540 acagtaggga ttcgcatgtg gtcacccacc atactactaa cctaccggcg tgtggcttaa 3600 gtacggctga gcggacggga agccctgttc tccacaccct atggtcgtat gtacttggaa 3660 atatacgaaa tcaggataat acagttctac taggcaaaga tatccttacg gcaagcctgt 3720 attgacaggt tgccagcatg tcagggccct tatgtggtgg cccgctttta ctagaatata 3780 aaatcacacg aatagtattt agaaactatt agtatgatag aaaaaatact ttccttggat 3840 aatggagegg aegttaaege eeaegteggt ttgtatggea aaageteeee aggtggaage 3900 gctggctcat gtgctttgtt gggctgtttg gcagttttgg cgggaaataa aggtgctgaa 3960

accagatggg gagacgtaat tggtaacatc tatagcatga ccgtaggagg tgcgcgatct 4020 aggtacccag cattggttag aggggtagtc agatacaaat ccagcgctct aaaagtgacc 4080 attgttacca gttctgttgc tgaacttaac gaactatttc cagaccagaa gaatatgaac 4140 actattccag tggctgcttt tctaaggaag aatccagtac caagtttcct gctagttgct 4200 gttcaaggtc aatcacagat ttccattctt gtagcattca aatttcccct agatctgttg 4260 gttctgttgt tgctgccttt tgtttcgcag gtcatgaata gggtcatagt acagtgactt 4320 gctgtattgt caagtactgg aaataaccag tctcctctgt agatggatac ttcggccctg 4380 gaagtgatga aaggctggat gtaactctca cagaaaaatt caagggccca tttaaggaat 4440 gaattgaacc ggattttacc tctaataaca tattctcctt gtaactgcac acctggccct 4500 gatg

<210>	3403
<211>	1194
<212>	DNA
<213>	Aspergillus nidulans
<223>	unsure at all n locations
<400>	3403

tcatctccga ggcgatcccg gcttcttcag cgcttggtcc ttggccgctt taagctcctt gatettttee tgetgetetg ggetettgaa egecaeegge ettggeeega eeegagagtt teatggeett attgaagate tggaggatea geacegeacg gatetgacea eegaceatet 180 gcccccgata gaggaactgg ttcgtgcaca gactctggat ggcctgcatg acggtgatac 240 cgacgacaaa gcccatcccg cggccgatac gcggggccgg ctggcccgag cgctgagcaa 300 cataggeete agttgeaaag gegatetgat aaegggteag ataeggageg aagaegatea gcagtgaaga gatcagatgg cagaaaccgc cgagtaggaa ctcgaagcgg aaggtgtcgt 420 acaaggccca gagcagcggc cgcttcgccc cggcgtttgt tctcttctcc agggaaacct 480 caaagcgctt cgtcaaaacg tcgacctctc gatctgggtt gacggtccag atatcctgca 540 attccagcgg gcgtagatag ccgacctgga ggcgattagc ttgcgcacgt gactcgcgcg 600 cgaacgacgt accttcatta acggggccat ccattgaaag gacgcgatac tgaagaacga ggccccatat tcacgcgaca ccgtccgttc ttcaggtacg ggggggattt tttgccagcg

tagtgggttg aggctgcgct ggtaccactt ctgcgccttt ggatcggcac tttcagcctc 780 ggtggattca gatccagttt ccgaccgcga cccagcggtc ggaggctgcc ccccgctctc 840 ggcaatcttg gcttcagaag acaaccgcat cgtcttgaga ggatctcatc tcgaggctgc 900 gacggagtca cgacccgtgg ggggagcaca ggataaagag gacagtcttg atgggagcca 960 tcggtggtat cggcgataag ggtgccgata cccgggtggc ccattactaa gcgttcttct 1020 cattggtcag cccaatatga aggatttctg ctaagcgagc tctctatagt acgtaagtac 1080 aggtattgat cacgtactat caggatttct ggtgaaaacg caacancaga aaagccattg 1140 ctcctcgctt tgtctgagct ggtcaatggc gttgtattgc aatatacagg cctt 1194

<210> 3404 <211> 2191 <212> DNA

<213> Aspergillus nidulans

<400> 3404

60 gactgattac gcatttgatg atatagcatg cgaactcggc ggtcgtcgtc ccggtgtcgg cagggatggt gttggggacg tcgacagcga aattcgggtc ccaggagagc aggatcagat 180 agatgcattg gcctccaacc caagattgga agccgtacca tactaaatag catgcatgaa 240 taactgtctt cagacgagtc agatcgggtt ctggcaggac gtaccaacgc ccagaaaaat 300 acgattccag atgacaaatt gagatcccca tagtccccag actgcacggc tgaagatggg gaagccgact aagttggtca gcagtcaatc cctcttcgag caatagtgcg tgcacttgac 420 tcactgtggt aatatgcccc ggccagggag ctggcgacta gggccaatgt cgccagaagg 480 ttgcccacca cgattgcttt ttgggaatca gcatgagaca tgaggagaag ataggcagtg aagcactcac agataacggc ctgccaccag gtgagcccaa ggggtataag agagctacca 600 gtcagatagc tggaaatatt gcaattgatc aagagccctg aacgactacg aatgagccac 660 tegttetgte acgagaggtg gtetttttag ggtattatae aaaagttatg aaaagteaga 720 aacccccatg ttcggtgtct cgcattcaca gggcggatat cgtcgttctg ggacatcgtc 780 840 agcctaggca ggatggaaat aatgcgaccg agctttttga agtattaggg gccccataca atccatcgcg attcacgagg tagtgatatc ttctttagtg ctgtggtgat tttcatcttg

ttcgagagcg cgacctgcat aggcacggaa atccattagg tctacagcag ccgttgggca 960 ccttttatca tgatatgagt tggagatttg gagtcatcag gcctgctgca ctatatggct 1020 tggctctctg tttggtcgag aaaaggctac tatcaatgcc tccctgtcca ctagtccggc 1080 tatctaccgc cattggagag accggactct gatgaggaat tgccggtcag ctaacgatgc 1140 gcataaattt attgctttct gtgtccatca ataccccact cacactaagc aaaggagctg 1200 atataaacaa gaccagccgg cacattgccg tttgatccgg gtcaagaggg gatatagagc 1260 aagacattac agataccgcg aagtaccgac tcgcgtggtg cctataataa atggcaggac 1320 ttcttgatgt ctgcttctac agtgtcactt catgaaatac agaggttgcc cgctcggttg 1380 catggcccat tegectaegg gataegatat ettgtttaga atgettaeta tgecaggeet 1440 attgccctct aacaaagata tatgcgtcac atatagccgc aatcacccga acaagctgat 1500 ccgagcggcc ccaggagttc gaagaccagc tatgttgggt tggtatgcgc tcttcgactc 1560 gctcattatc attatagttg agctagtcac cgccgaagca gaggatgaca ggcactagag 1620 atggctctac acagcatgac aaggtatatg cttgattagt accaagctac atttcccgaa 1680 gegagaaate tettaeteea aactteagae eeaacetate aaatgeagee eecaeggeee 1740 cgtctaaact tctcgagaac atccaacgcc cgctggatga cgtctggcgg atacgcaaag 1800 atgatecteg eccatececa gaegeegtet ecaagegeat agttetgeee etgggagaca 1860 accaageeca aetgtgeaag ttegtgeaea geggetgttt etteettege aetggageaa 1920 ttgtccacca atctgaagaa cacgcatagg ccgtagtttg cggggataaa cttgatatgc 1980 agtetetega aaccaegggt aagtagattg tatgeageag tgagtetete agagetettt 2040 gcgatgagca agggaaggtg cggtgagtca agaagggcta tggtcatgac ggtcgttaaa 2100 gaggatactt cgaggtagct ggtgagccca gagccgagac gtaacgtgtc ggtggcttgc 2160 gatattatgc agccctaaga tactgttaag a 2191

<210> 3405 <211> 3782 <212> DNA <213> Aspergillus nidulans

<400> 3405

cccatcatca tccacttgcc gacaggagag acaatcgaca cgcgttgaag agatgaaggt 60

ccaactgaga aggtcgttcc tacagtgcat tatcggcaga atctgcaatc tgattcattt acctgtactc tgccagtaac gtttcgaaaa cgtagtgctt ttgtttttgt tgaccagact aggagagtca gcagacgaat tttagaagga tccaacccct gaccatgctc tgctagacaa 240 acggttgcga tgaacgctcg gctccagccc gacgcccggt tcgtgccatc gataaaggct 300 cattggctga tccctcagtg tgtgagatta atcctggtca aaactctgga atatgtgggt tatggggctg gctttggaat ttaaatcatt attgcagcgc actgaagacg tcagacacaa ctgcgggtgg actgactggt gggggtttgt ccacggattt tattatttaa tatgtctttg 480 gcctttatta tgccgcaagg gcaatacata caaagtatgt ggcgagttta cgttttgtat 540 tgaataagac tggtgaaagc cacgtgactg atataaccct gtacaactat catataccat 600 ctcggcattt gatcttaggg ttcaaaatga tctggaaatg atctaaagat gacttgaaga 660 ttagaggcag tggacagttc atagacaaat ccgcgtaaac ctgcctagat ggtcggaaaa 720 ggcgaattca tccaatttgg cgtcagacgt ttatacagat caagatagta agatcgagcc tttgcctcac accatttttc ttgtcgtctg cttgagacca aagtgcagcc gagctaatct agccaaaggt cctgtttttg gattggagga gacagaagag aagcaaattg taggtttatt cagctctcaa cggtaaagag cagtggaact atcacctgcg ccgatgctgc catacaacgc 960 cactacatca atcatttacc tataccggac cgcttcctgt taccctagta tccagatatg 1020 caaaccccta acgttagccg gaaacaatga ctcgagacgc gtgggccaaa tttcgaagcg 1080 tgagaaaaac cgaggaaaga ggcatgttag cctagtggaa gagcaatcaa tgcgggatat 1140 cacagaatca aggatcaaga agaaccgaag gagcagtaat atgcatgtcg cgatgggccg 1200 ggtctctcca aatagaccgg gacgtagagt atgaacatcc tccgttattg atatcggaat 1260 atgagcaaca atggtgcaaa tcagaaaaga aaataagaac aatggccaag aagtcattac 1320 atccagctga tgcgggatga atgaaaggag atacagaata aatcttctgg ggtatgttaa 1380 acgaggacaa aatcggagac tcatcctgag cccctattca ggaggaaaac atgtacagcg 1440 caggaaaaag acaagatata tgcagacatc acaactccac tagcatgcat cgaaagccat 1500 aatcacatgt caaaattgtc gtcaacattg aaaatctcac ccgcatctcc agtcttctga 1560 acgccagcca tgcggtgatc tatagaattc ccagatcgat gggaccgatg cattggctcg 1620 taatcctcat ccatacgatc ccctacttcg ttcttgaaat ggtgatcgat cgagctctca 1680

ttcacaaagg taaacccttg gaaattagct tgcatccctg gagagagcgg cgtcgacgcg 1740 gccataaacc cattggcaag agctgcagct cggtcattta gcgagttact gttttcaaga 1800 gcgttggtaa actctgggtc aaagttggac gtatctgtgt cggacttgag cttgggtttg 1860 aacggtggga tgacctcttt tctgcccagt gcctcccagt caatgtcatg gaaaaagggg 1920 tgcgccatga gttctttcgc gtcattctgg gctcccaggc ggtgcttggg attccggttg 1980 agcaggcctt tcacaaagtt gcgtccttcc gtgcttaaag catcacgagg gaaccggacc 2040 ttgccgaagg caatgttttt gtacatctgc tgcgtgtcct ccgcgtagaa cggactccag 2100 ccacaacaca teteaaagae gaggaeaece agtgaecaaa aateaaecat titegtatae 2160 ccttgttcat cgagtagtac ctccggggca agatattctg ttgtgccgca aaacgtattc 2220 gttgtatcgt tctgcgtaag attcgccttt gacagaccga aatcacaaag cgcgatgtga 2280 ccattggcat caagcagaat attctccggt ttgaggtcac ggtatacgat atcatggtcg 2340 tgtagatgtt gcaaagccat gatgagctcg gcaatgtaaa acttggcgcg gggctcctgg 2400 . aaccgtccct ctttctggag atgccagaat agctcacctc cagacatgta atccgtgacc 2460 aggtagagat ccgtgggtgt ttggaaagag aacttgagcc cgacgataaa cggagaagca 2520 gccatagctg ttcgaaccag gatatttctt tctccaacgg tgtgcgcaac ctccttcttc 2580 tgaatgataa ctttcttcga gagcaccttc atcgcataaa ttcgccgtgt atccttcttc 2640 ttaacctggt agacttggcc aaaggttccc ttgccgatca gcttcaggat ttgaaagtca 2700 tttggtccga cctgcttctt ctccgtcttc tcaaacctca tttccatatg aatctctccg 2760 gaaactcggg agtcccctgc tgcccgacct ttcaagggaa accacccgtc caagcgactg 2820 ttatetteet taagatteae geagagtege acatggeeta ggaaggette egagteattg 2880 cggtcataca cggagacgtc aatttcagac tggtcaccga aaacatcact agatagcaac 2940 aaagatcagg aaactgcaac atttgaagac aaaaagtata gggataagaa gataatctta 3000 caagaccgct tcatggttcc agtgtggatc tgtgatagga gcatgtcctc tgtggtctgt 3060 getetegaga gtattgttat ggetaetetg teggtteate ggaatageea ttggtegtee 3120 agaatcgagg gccgattgct ctagttcctt ctgttgtcgt ttcaaggatt cttgctcctc 3180 gtcctgaacg ctcttcgaaa ttacctcgtt ccactcgaaa acacagacca catatgggtc 3240 gaaccccggt tggaggccct tcccctccga aatcttgaca tgcagcttgc ctttgagaga 3300

tgctaccggg ggaccggaag acggtgagga agaagtatcc atcgacgac ggaagacttc 3360 gttaagtttt cctgtgattt cgtcggcgga atctgacggt tcgtcgcgcg gcgaatgggt 3420 ggggttcgat gatcggggag gggatgcggg agctttccca ttggattgca aatcttcatc 3480 ggacattgcc cgaggtgat gaggagggt attcttaag tgtgaaggat ttgacacgtt 3540 ggcagttagc ttcgcggcgt tctcagaaga cgcagaaaca tgcggtttct catggtcgag 3600 aaggggggct tcgactaagc aaagtgattc cggagtttgg gaaagaaga ggttgaagaa 3660 atgagaggca aggacgggat cgtcagaaat gctggagacg ggatgagaag aataacgacg 3720 tgcctgagaa tcagaacag acacgcttcg agatggaggt ggatatctct tcagtgtatt 3780 aa 3782

<210> 3406 <211> 3382 <212> DNA <213> Aspergillus n

<213> Aspergillus nidulans

<400> 3406

gaggaaccgt ccgggttgga tctgtccagt tggcgcgcga tgctcatgtg tttccaaacg 60 agggctgaga cggcctcgac tttagtgaac tgggtggatt cgtcgttttc gacttgtgcg 120 agacgatcgc ggagggcttt gagcgatgat gcgctgaaat accaggtgct tacagaataa 180 ggtactgtga cggggttttc gcggtcgagc aggtaggaac cgcttgggtc ttcgcgggca gagctatcaa tcgtgtattc gggaagttgg tcaatagtaa cctctcgcag gccgtgatct 300 aatcgccacc gatcacggct gccctctgct ggtgtcgcag gcagatcggg tttgccgttt 360 gctagcgacg tcgctgtatg cctggcccag gcatcgatca ggatactgat gcctctcgca tcacatactg aatggtgcca tgagatcgcg atgataactc cgccatcaat aatattgacc tgcagaaacg cagcaggcag tccgtccgcg cttggttgcg gctgtgggat gaagaggata 540 tcgtgaggaa tatcactggt ggggaagtgt ttcgcagcca gatcagggta ggtgccatat 600 acccaagatt cctgctttgt ttgatccacg accttgaaag ggacgcccga attgggcccg 660 atgegtaget ceaggteett geggtgagaa ttegggaetg gageaatggt egeggegagg 720 780 traggtatet egetraaggt carggegagg cettgettea ggtggtgaar aatgtraate gaggtttttg aggaatcgcg ctcaaagata aagacggcct ttgcatagaa tcgcattatc

tgttgatcta gagccgagag cttgatcacg tcctcgctta gaggtacgct gagcttgacg tttgtttctt ccattgtgag taaaaccctg agatttggtc acagtcccaa agtcaagata gagettgtat agatgettga ttgacegggt tetttgeatt geaaaaaaag agttgtatag 1020 gtaaacaaga gcatatatgg agcgcgaagc ttggagcagg acataacgcg acgcactgtt 1080 ccggcctaat gcaacgccaa gcctaatcgc caaatatcga ttctcccagg ttcctctcag 1140 gttcctcttc tctccactac acccctacag tcacatactg acaacatcct acgtaaccga 1200 gtatcaatgc agatccagca gcttagcgct caaccattct tgggaatagg atcgcatggc 1260 agcagagece actetgettt cettegeeta gattaggeet gtegatetgt gatteetteg 1320 cgtcaaatgg cgggtcgatc gtctgcaagt agttcggccg gtcctatggc ctgggcatcg 1380 cagatotyto ttyactotto tygayttacy gaytaacota cottootttt atttoottoy 1440 tetegteata gtgggetaac cetgttetet teggtagtga ttggeeegtg atteceeatg 1500 accactctgc aacgaacacg tccaagggta tctcggatat agcatacttc gggcgctgca 1560 ggaaatgaaa gtttcgccac cgagataatc tgtccgtcag tgattccgtg gagggagaat 1620 agttcccttg gtggaaaagc cctagcaacg accccgatca tggcacgtaa tgaaaatggt 1680 aactcgattt ctgggcatgc cctgggtgga cctgacatga cggattagaa ccgaggattc 1740 gttccctggt attgcgtgct gtacttaacg ctggccttgt atctttcttc aaacatcccg 1800 tatcttgatc acgatacccc atgctattca gacggtcaac gattagccgt acctcctaat 1860 ttctacagcc atgagtcctg catccaggtc ccgtgttgag atcgctgata gcgagtcaga 1920 cagtgagagg ctttcttcct cgccgtggtc tatactcagc gacaatgata gcaatacatc 1980 tgatgagcgc agcacaaggg ctggccccgg ctcactggag ccaatcgcag ttattggtat 2040 aggatgtcga ctatcaggaa gcgcaacaga cgtttctggg ctttgggata tgctgaaatc 2100 tggtcgctcg ggatggacac cagggcctgg gacacggttc aacatgaagg ccttccaaga 2160 cccgacaggg accaggtctg gaacagtaag cggcgcttga tggttcaaga agagtatgtg 2220 ctaaattgat tcatttcttt tcagacaaat gccacaggag gacacttcat tcgagaagat 2280 atatcaaagt ttgatgctac atttttcggg atcaaccctg tcgaggcaca ggtatgtata 2340 aaatatgcat ggcgcaggcc tttgtctcaa attagcgatc gaatgcgatt ctaacgcttc 2400 gcctctgcaa ttaggcaatg gatccccagc aacgcctgat gctcgaagta gcctacgaag 2460

cctttgaaaa cgccggtatc acgatggatg cattgtgggg atccaatacc ggtgtatacg 2520 teggteagtg ggetteggat taccacqaqa tagetacteg tgatattgag agaccacete 2580 tataccttgt gacaggcacc gggcctgcaa tcacaagcaa tcgggtctca tatgtcttca 2640 atttgcgcgg gcccagcttc acagtggata ctggatgttc gtcaagttta gtggcgttac 2700 atcaageggt ceteagettg eggaaceggg aaaceaegea gtgetttgtt ggaggegtta 2760 acctactict tgacccacaa cgctttcact accagageeg gettaaaatg ttttctaaaq 2820 acggtcgatc ttttccattt gatgctcgtg ctaatggata tggacgaggt gaaggtgtca 2880 cgggtgttgt tctcaaacca ttatcagttg ccctgcgaga tggtgaccct gttcgggctg 2940 ttattagaaa ctctgtcctg aaccaggacg gccggacacc tggtatcagt gtgccgagcg 3000 ctgttgccca gaaagaagcc atcataaggg cctacagaca ggcaaagctg gatttgtatg 3060 ctgactatgt ggaagcccat ggcaccggaa ccaaggttgg cgatccaatc gagacgagcg 3120 ctattgcage ggccctaacg caaaggaggt cgccttcccg gcctctgccc attggatcca 3180 tcaagggaaa tattggccac acggaaagtg ccgccggtct cgctgggctg atcaagtccg 3240 ttettatget tgagaaeggt atgatteege eteaggtgaa etatgagaea aegaaeeetg 3300 acatecatet ggaggagtgg aatttaegag taegtaagaa ttetgtegaa aacatgacaa 3360 cactgactct accagatccc ca 3382

<210> 3407 <211> 6339 <212> DNA

<213> Aspergillus nidulans

<400> 3407

acctttctag catcttccat ggcaagcttg ccgaagctga cggcgtcgcg taaagcatag 60 tccagtcgat cagcacagag ttgaggcgat ggcatctcca ctaaagggaa aagttcttcc 120 tcaaaaaacct tctggttgat cccatgtctg gcgaggatgt ccggcagccg cgtcgtctca 180 agataccgtg tcttgtgtac ctcgtgatag cttccttccc cgggcttgga gagggcgtga 240 tcaatgacat gactgagggt ggtatgagag atgtcatgga gaagagcagc gacttgttct 300 tcaattgtgg caccaactct tcgcacgagt ataaatgcac cgactgaatg ttcaagccga 360 gtgactcgcg gtgtcaggcc caagaatcca gtaactccat gctggcagat gccttgcagt 420